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Service Manual

ORDER NO.
RRV3805

DVD/CD RECEIVER

XV-CX505-K

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Region No.	Remarks
XV-CX505-K	GFXJ	AC 110 V to 220 V	3	
XV-CX505-K	NAXJ5	AC 220 V	6	
XV-CX505-K	NTXJ	AC 220 V	3	
XV-CX505-K	TDXJ/RB	AC 110 V to 240 V	2	
XV-CX505-K	WLXJ	AC 220 V to 240 V	3	
XV-CX505-K	GXJRD1	AC 110 V to 220 V	4	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
XV-CX505/GFXJ	RRV3646	

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

Notes : DVD Data Disc for this model is GGV1326. (ID data setting)

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2008**

T-ZZK JULY 2008 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*
- *Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω → 56 x 10^1 → 561 ····· RD1/4PU561J
47kΩ → 47 x 10^3 → 473 ····· RD1/4PU473J
0.5Ω → R50 ····· RN2HR50K
1Ω → 1R0 ····· RS1P1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 x 10^1 → 5621 ····· RN1/4PC5621F

CONTRAST TABLE

XV-CX505/GFXJ, XV-CX505-K/GFXJ, XV-CX505-K/NAXJ5 and XV-CX505-K/NTXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	XV-CX505 /GFXJ	XV-CX505-K /GFXJ	XV-CX505-K /NAXJ5	XV-CX505-K /NTXJ	Remarks
		PCB ASSEMBLIES					
	P55- 2	DVDMAIN Assy 6ch	XWM3386	XWM3386	XWM3381	XWM3380	
		PACKING SECTION					
⚠	P53- 1	AC Power Cord	ADG1154	ADG1154	ADG7079	XDG3056	
⚠	P53- 2	AC Power Cord	ADG7097	ADG7097	Not used	Not used	
	P53- 5	Caution Card SB	ARM7064	ARM7064	Not used	Not used	
	P53-15	Packing Case	XHD3741	XHD3846	XHD3848	XHD3847	
	P53-16	Operating Instructions (English)	XRB3083	XRB3083	Not used	Not used	
	P53-17	Operating Instructions (Trad Chinese)	XRC3303	XRC3303	Not used	Not used	
	P53-17	Operating Instructions (Simp Chinese)	Not used	Not used	XRC3304	Not used	
	P53-19	Operating Instructions (Thai)	Not used	Not used	Not used	XRC3307	
NSP	P53-21	Main Unit Assy	XXX3031	XXX3065	XXX3067	XXX3066	
NSP	P53-22	Power Unit Assy	XXX3041	XXX3071	XXX3073	XXX3072	
NSP	P53-24	Vinyl Bag	Not used	Not used	Not used	AHG7031	
NSP	P53-25	Service Map(thai)	Not used	Not used	Not used	XRY3005	
NSP	P53-26	Warranty Card	Not used	Not used	ARY7046	XRY3004	
	P53-28	Protection Sheet	XEC3083	Not used	Not used	Not used	
		MAIN Unit Assy					
	P55-26	Tray Cap	XAK3588	XAK3627	XAK3627	XAK3627	
NSP	P55-33	Chassis	XNA3037	XNA3068	XNA3069	XNA3067	
NSP	P55-36	Top Shield	XNG3160	XNG3160	XNG3168	XNG3160	
NSP	P55-39	Under Base Assy	XXG3318	XXG3393	XXG3393	XXG3393	
	P55-41	Under Base	XMB3284	XMB3344	XMB3344	XMB3344	
	P55-42	Mecha Holder	XMR3115	XMR3125	XMR3125	XMR3125	
	P55-47	Top Display Assy	XXG3322	XXG3392	XXG3392	XXG3392	
NSP	P55-49	Top Panel	XAK3579	XAK3626	XAK3626	XAK3626	
	P55-56	Caution Label	VRW2159	VRW2159	Not used	VRW2257	
	P55-56	RAM Caution Label	Not used	Not used	VRW1904	Not used	
NSP	P55-58	Name Label	XAL3267	XAL3267	XAL3270	XAL3266	
NSP	P55-59	Getter Label	XAX3653	XAX3712	XAX3713	XAX3712	
		POWER Unit Assy					
	P57- 5	Box Base	XNA3049	XNA3075	XNA3077	XNA3076	
NSP	P57- 7	CCC S&E Label	Not used	Not used	DRW2310	Not used	

Notes : For PCB ASSEMBLIES, Refer to “CONTRAST OF PCB ASSEMBLIES”.

XV-CX505/GFXJ, XV-CX505-K/TDXJ/RB, XV-CX505-K/WLXJ and XV-CX505-K/GXJRD1 are constructed the same except for the following:

Mark	No.	Symbol and Description	XV-CX505 /GFXJ	XV-CX505-K /TDXJ/RB	XV-CX505-K /WLXJ	XV-CX505-K /GXJRD1	Remarks
		PCB ASSEMBLIES					
	P55- 2	DVDMAIN Assy 6ch	XWM3386	XWM3379	XWM3378	XWM3378	
		PACKING SECTION					
⚠	P53- 1	AC Power Cord	ADG1154	ADG1154	ADG1154	ADG1154	
⚠	P53- 2	AC Power Cord	ADG7097	Not used	Not used	Not used	
⚠		AC Power Cord	Not used	Not used	Not used	XDG3033	
	P53- 5	Caution Card SB	ARM7064	Not used	Not used	Not used	
	P53- 9	Operating Instructions (Arabic)	Not used	XRC3306	Not used	Not used	
	P53-15	Packing Case	XHD3741	XHD3845	XHD3844	XHD3872	
	P53-16	Operating Instructions (English)	XRB3083	XRB3084	XRB3083	XRB3083	
	P53-17	Operating Instructions (Trad Chinese)	XRC3303	Not used	XRC3303	Not used	
	P53-18	Operating Instructions (Spanish)	Not used	Not used	Not used	XRC3305	
NSP	P53-21	Main Unit Assy	XXX3031	XXX3064	XXX3063	XXX3082	
NSP	P53-22	Power Unit Assy	XXX3041	XXX3070	XXX3069	XXX3083	
	P53-28	Protection Sheet	XEC3083	Not used	Not used	Not used	
		MAIN Unit Assy					
	P55-26	Tray Cap	XAK3588	XAK3627	XAK3627	XAK3627	
NSP	P55-33	Chassis	XNA3037	XNA3067	XNA3067	XNA3082	
NSP	P55-36	Top Shield	XNG3160	XNG3165	XNG3160	XNG3164	
NSP	P55-39	Under Base Assy	XXG3318	XXG3393	XXG3393	XXG3393	
	P55-41	Under Base	XMB3284	XMB3344	XMB3344	XMB3344	
	P55-42	Mecha Holder	XMR3115	XMR3125	XMR3125	XMR3125	
	P55-47	Top Display Assy	XXG3322	XXG3392	XXG3392	XXG3392	
NSP	P55-49	Top Panel	XAK3579	XAK3626	XAK3626	XAK3626	
	P55-56	Caution Label	VRW2159	VRW2257	VRW2257	VRW2257	
NSP	P55-58	Name Label	XAL3267	XAL3266	XAL3266	XAL3266	
NSP	P55-59	Getter Label	XAX3653	XAX3712	XAX3712	XAX3712	
		POWER Unit Assy					
	P57-5	Box Base	XNA3049	XNA3074	XNA3073	XNA3083	

Notes : For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES".

CONTRAST OF PCB ASSEMBLIES

BF DVDMAIN ASSY

XWM3386, XWM3381, XWM3380, XWM3379 and XWM3378 are constructed the same except for the following:

Mark	Symbol and Description	XWM3386	XWM3381	XWM3380	XWM3379	XWM3378	Remarks
	R5513	Not used	RD1/4PU393J	RD1/4PU103J	RD1/4PU393J	RD1/4PU103J	*1
	R5515	RD1/4PU103J	RD1/4PU103J	RD1/4PU103J	RD1/4PU683J	Not used	

*1 : Refer to DESTINATION MODEL of "10.2 DVD MAIN ASSY (2/5)" on the service manual RRV3646.

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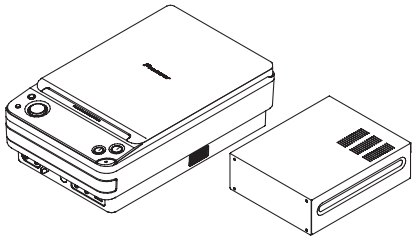
Service Manual



XV-CX505

ORDER NO.
RRV3646

DVD/CD RECEIVER

XV-CX505

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Regional restriction codes (Region No.)	Remarks
XV-CX505	GFXJ	AC 110 V to 220 V	3	
XV-CX505	NAXJ5	AC 220 V	6	
XV-CX505	NTXJ	AC 220 V	3	
XV-CX505	TDXJ/RB	AC 110 V to 240 V	2	
XV-CX505	WLXJ	AC 220 V to 240 V	3	
XV-CX505	GXJ/RDDF	AC 110 V to 220 V	4	

For details, refer to "Important Check Points for good servicing".

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ⓒ**PIONEER CORPORATION 2007**

T-FZK AUG. 2007 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING!

The laser component is capable of emitting radiation exceeding the limit for CLASS 1. A specially instructed person should do servicing operation of the apparatus.

LASER DIODE CHARACTERISTICS

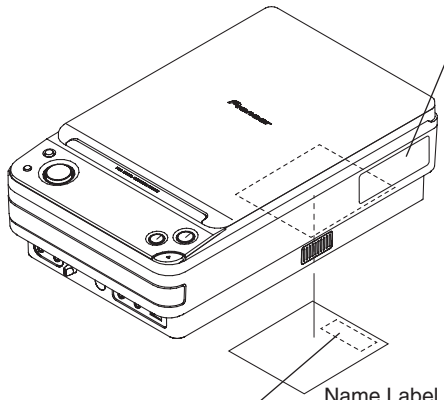
FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 7 mW
WAVELENGTH : 780 nm

LABEL CHECK

CAUTION	CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO THE BEAM.
ATTENTION	RADIATIONS LASER VISIBLES ET INVISIBLES DE CLASSE 3B QUAND OUVERT. ÉVITEZ TOUT EXPOSITION AU FAISCEAU.
ADVARSEL	KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING	KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
VORSICHT	BEI GEÖFFNETER ABDECKUNG IST SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B IM GERÄTEINNEREN VORHANDEN. NICHT DEM LASERSTRAHLAUSSETZEN!
PRECAUCIÓN	CUANDO SE ABRE HAY RADIACIÓN LÁSER DE CLASE 3B VISIBLE E INVISIBLE. EVITE LA EXPOSICIÓN A LOS RAYOS LÁSER.
VARO!	AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

VRW2257-A

XV-CX505/WLXJ, NTXJ, TDXJ/RB and GXJ/RDDF : VRW2257



Name Label

CLASS 1
LASER PRODUCT

CAUTION : CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO THE BEAM.

注意 : 打開時會有 CLASS 3B 可見和不可見鐳射輻射，請勿受鐳射束輻射。

VRW2159

XV-CX505/GFXJ : VRW2159

CAUTION : *VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.*

注意 : *若打开会发生可见和不可见的镭射辐射，请勿受辐射。*

VRW1904

XV-CX505/NAXJ5: VRW1904

Additional Laser Caution

1. Laser Interlock Mechanism
   • Loading switch (S101 on the LOAB Assy) is used for interlock mechanism of the laser.
   When this switch turned ON in SW2 (CLOSE) side (OPEN signal is 0 V and CLOSE signal is 3.5 V), a laser becomes the status which can completely oscillation.
   Furthermore, the laser completely oscillates in the disc judgment and disc playback.
   When player is power ON state and laser diode is not completely oscillating, 780 nm laser diode is always oscillating by half power.
   • Laser diode is driving with Q307 (650 nm LD) and Q308 (780 nm LD) on the DVD MAIN Assy.
   Therefore, when short-circuit between the emitter and collector of these transistors or the base voltage is supplied for transistors turn on, the laser oscillates. (failure mode)
   • In the test mode ∗ , there is the mode that the laser oscillates except for the disc judgment and playback. LD ON mode in the test mode oscillates with the laser forcibly.
   The interlock mechanism mentioned above becomes invalid in this mode.

2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

∗ : Refer to page 24.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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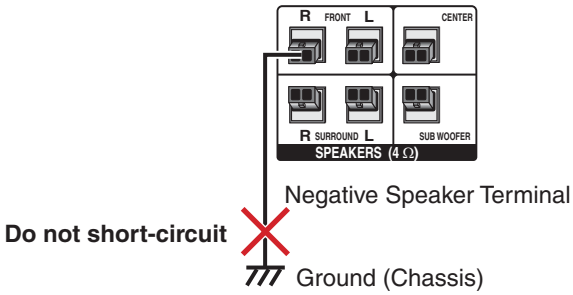
1. SERVICE PRECAUTIONS

CAUTION

Ask users to bring both MAIN UNIT and POWER SUPPLY UNIT together when servicing.

NOTES ON BTL DRIVE

As a signal to drive the BTL is output from the negative speaker terminal, DO NOT short-circuit between the negative speaker terminal and ground, such as the chassis.
Do not short-circuit between the plus speaker terminal and ground, such as the chassis, too.



NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS and ACCESORRIES

• Amplifier section

CX505/CX500 model

Continuous power output:

Front . . . . . .100 W per channel (1 kHz, 10 % T.H.D., 4 Ω)

Center. . . . . 100 W (1 kHz, 10 % T.H.D., 4 Ω)

Surround . . . . . .100 W per channel (1 kHz, 10 % T.H.D., 4 Ω)

Subwoofer . . . 100 W (100 Hz, 10 % T.H.D., 4 Ω)

CX303 model

Front . . . . . .100 W per channel (1 kHz, 10 % T.H.D., 4 Ω)

Subwoofer . . . 100 W (100 Hz, 10 % T.H.D., 4 Ω)

• Disc section

Digital audio characteristics

. . . . . .DVD fs: 96 kHz, 24-bit

Type . . .DVD system, Video CD/Super VCD system and Compact Disc digital audio system

Frequency response . . . . . .20 Hz to 44 kHz

S/N ratio. . . . . 88 dB

Dynamic range . . . . . 83 dB

Total harmonic distortion . . . . . 0.01 %

Wow and Flutter. . . . . Limit of measurement (±0.001 % W.PEAK) or less (JEITA)

• FM tuner section

Frequency range . . . . . .87.5 MHz to 108 MHz

Antenna . . . . . .75 Ω, unbalanced

• AM tuner section

Frequency range:

With 9 kHz step . . . . . .531 kHz to 1602 kHz

With 10 kHz step . . . . . .530 kHz to 1700 kHz

Antenna . . . . . Loop antenna

• Miscellaneous

Power requirements

Australia, New Zealand model

. . . . . AC 240 V, 50 Hz/60 Hz

Singapore, Malaysia, Indonesia model

. . . . . AC 220 V to 240 V, 50 Hz/60 Hz

Taiwanese, Philipines, Argentine, Duty free model

. . . . . AC 110 V to 220 V, 50 Hz/60 Hz

Chinese, Thai model . . . .AC 220 V, 50 Hz/60 Hz

Power consumption:

CX505/CX500 model . . . . . .66 W

CX303 model. . . . . 43 W

Power consumption in standby mode . . . . . .0.5 W

Dimensions:

DVD/CD Receiver

. . . . . 336 mm (W) x 110 mm (H) x 210 mm (D)

Power unit

. . . . . 207 mm (W) x 65 mm (H) x 165 mm (D)

Weight:

DVD/CD Receiver. . . . . 3.0 kg

Power unit. . . . . 1.2 kg

• Accessories (DVD/CD receiver)

Remote control. 1

Power cord:

Duty free model 2

Argentine (CX303 only), Taiwan, Philippines models. 2

All other models. 1

Power plug adapter (CX303 Argentine model only) 1

Video cord 1

AM loop antenna 1

FM antenna 1

AA/R6 dry cell batteries (to confirm system operation) 2

Operating instructions

Note

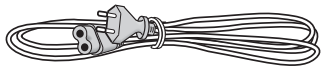
- Specifications and design subject to possible modification without notice, due to improvements.

Manufactured under license from Dolby Laboratories.“Dolby”, “Pro Logic” and the double-D symbol are trademarks of Dolby Laboratories.

“DTS”, “DTS Digital Surround” and “DTS 2.0” are registered trademarks of DTS, Inc.

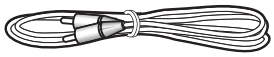
● Accessories

- Power Cord (Except NAXJ5 : ADG1154) (GFXJ only : ADG7097) (GXJ/RDDF only : XDG3033) (NAXJ5 : ADG7079)

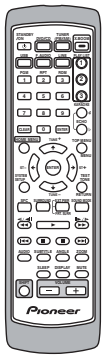


- FM Antenna (ADH7030)

- Video Cord (L = 1.5 m) (XDE3046)



- Remote Control (XXD3144)



- AM Loop Antenna (ATB7013)

- Dry Cell Battery (AA/R6)

Disc/content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format.

See the About DualDisc playback below for more information.

DVD-Video DVD-R DVD-RW

Audio CD Video CD CD-R CD-RW

Fujicolor CD

- This unit will play DVD+R/+RW discs.
- is a trademark of FUJIFILM Corporation.
- is a trademark of DVD Format/Logo Licensing Corporation.
- Also compatible with KODAK Picture CD.

This player supports the IEC's Super VCD standard for superior picture quality, dual soundtracks, and widescreen support.

Super Video CD (Super VCD)

About DualDisc playback

A DualDisc is a new two -sided disc, one side of which contains DVD content video, audio, etc. while the other side contains non-DVD content such as digital audio material.

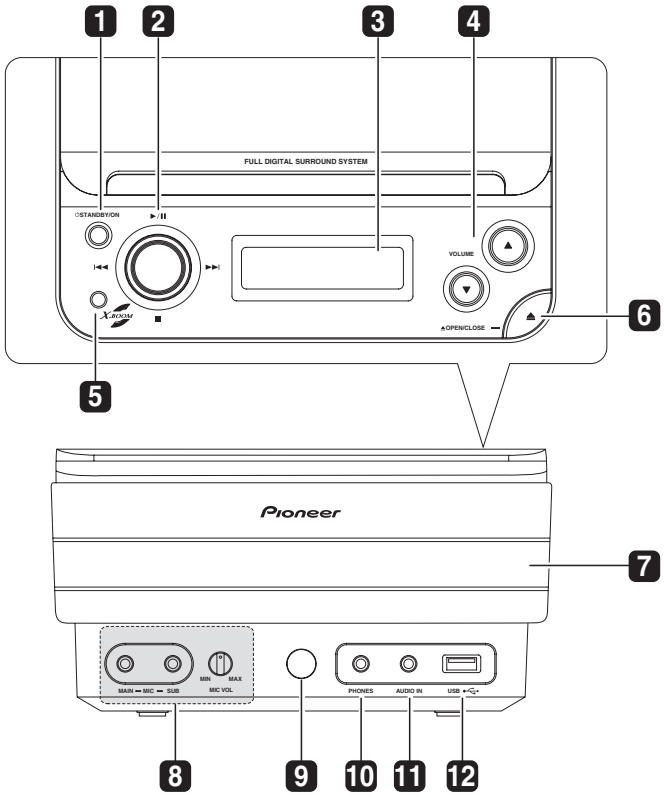
The non-DVD, audio side of the disc is not compliant with the CD Audio specification and therefore may not play.

The DVD side of a DualDisc plays in this product. DVD-Audio content will not play.

For more detailed information on the DualDisc specification, please refer to the disc manufacturer or disc retailer.

2.2 PANEL FACILITIES

Front panel



1 ⏻ STANDBY/ON
Switches the player on or into standby.

2 Playback controls
The skip buttons are used for skipping on discs. The playback control buttons are used for playing, pausing and stopping playback.

3 Display
See Display.

4 VOLUME
Adjusts the volume level.

5 X.BOOM button
Switches on the bass boost.

6 ⏏ OPEN/CLOSE
Opens/closes the disc tray.

7 Disc tray

8 MIC VOL and MIC input jacks
Controls the volume of the karaoke mics (**MAIN** and **SUB**).

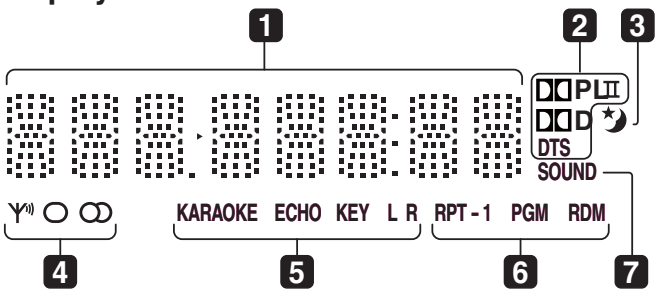
9 Remote sensor

10 PHONES jack
Headphone jack.

11 AUDIO IN
Connect an auxiliary component using a stereo mini-jack cable (see Connecting auxiliary components).

12 USB interface
Connect a USB device for playback (see USB playback).

Display



1 Character display

2 Format indicators
PL II (CX505/CX500 only) – Lights during Dolby Pro Logic II decoding.
D – Lights during playback of a Dolby Digital source.
DTS – Lights during playback of a DTS source.

3
Lights when the sleep timer is active.

4 Tuner indicators
– Lights when a broadcast is being received.
– Lights when FM mono reception is selected.
– Lights when a stereo FM broadcast is being received in auto stereo mode.

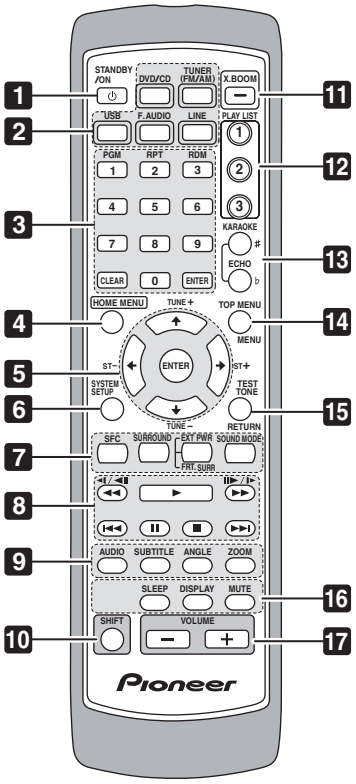
5 Karaoke indicators
KARAOKE (Vocal cancel) – Vocals in the backing track are partially eliminated using EQ.
ECHO – Lights when the Karaoke **ECHO** effect is selected.
KEY – Lights when the Karaoke pitch control is selected.
L – Left channel only. Use for tracks that have a vocal recorded in the right channel.
R – Right channel only. Use for tracks that have a vocal recorded in the left channel.
L R – Use to put a single-channel vocal track into the center of the mix.

6 Playback mode indicators
RPT-1 – **RPT** lights during repeat play (**RPT-1** lights during repeat one-track play).
PGM – Lights during program play.
RDM – Lights during random playback.

7 SOUND
Lights when the SFC modes, **XBOOM**, bass, treble, **ST.WIDE**, **MP3 EXP.** (MP3 Expander) or **VOICE. E.** (Voice Enhancer) are active.

Remote control

The illustration shows the CX505/CX500.



1 ⏻ STANDBY/ON

Switches the player on or into standby.

2 Input source function select

Selects the source you want to listen to.

3 Number buttons and SHIFT functions

The number buttons can be used for selecting tracks directly, the functions above the buttons are accessed by pressing **SHIFT** at the same time as the button.

PGM (**SHIFT**+**1**) – Use to program/play a program list.

RPT (**SHIFT**+**2**) – Selects a repeat play mode.

RDM (**SHIFT**+**3**) – Selects a random play mode.

CLEAR – Clears an entry.

ENTER – Selects menu options, etc.

4 HOME MENU

Press to display (or exit) the on-screen menu for Initial Settings, Play Mode functions, etc.

5 ENTER, TUNE & cursor control buttons

Navigates on-screen displays and menus. **ENTER** selects an option or executes a command.

6 SYSTEM SETUP

Use to make various system settings. Also used when saving station presets when using the tuner.

7 Sound Field/listening mode buttons

SFC – Selects sound modes or custom settings from the Sound Field Control.

SURROUND(CX505/CX500 only) – Selects a surround listening mode.

EXT PWR (CX505/CX500 only) – Switches on the Extra Power mode.

FRT.SURR (CX505/CX500 only) – Switches on the Front Surround mode.

SOUND MODE – Accesses settings in the Sound menu, such as the tone controls.

8 Playback controls

► – Starts/resumes playback.

◄◄ and ◄I/◄II – Use for reverse slow motion playback, frame reverse and reverse scanning.

►► and II►/I► – Use for forward slow motion playback, frame advance and forward scanning.

►►I – Jumps to the next chapter or track.

I◄◄ – Jumps to the beginning of the current chapter or track, then to previous chapters/tracks.

II – Pauses playback; press again to restart.

■ – Stops playback.

9 DVD controls

AUDIO – Selects the audio channel or language.

SUBTITLE – Selects a subtitle display.

ANGLE – Changes the camera angle during DVD multi-angle scene playback.

ZOOM– Changes the zoom level.

10 SHIFT

Press to access the functions/commands written in green on the remote.

11 X.BOOM

Switches the bass boost on or off.

12 PLAY LIST buttons

Adds tracks to (during playback), or selects the playlist (while stopped).

13 KARAOKE controls

KARAOKE – Selects audio channels for karaoke.

ECHO – Changes the echo level on the karaoke mics.

♯ / ♭ – Raises/lowers the pitch of the backing track.

14 MENU

Displays the DVD menu (for Video CD/ Super VCDs, DivX video and WMA/MP3/ MPEG-4 AAC/JPEG discs, the Disc Navigator screen appears).

TOP MENU (**SHIFT**+**MENU**)

Displays the top menu of a DVD disc.

15 RETURN

Press to return to a previous menu screen.

TEST TONE (**SHIFT**+**RETURN**) (CX505/CX500 only) – Press to output the test tone for speaker setup.

16 SLEEP

Press to set the sleep timer.

DISPLAY

Switches between information displays.

MUTE

Mutes the volume.

17 VOLUME

Adjusts the volume level.

3. BASIC ITEMS FOR SERVICE
3.1 CHECK POINTS AFTER SERVICING

Check points after servicing (HTZ and system audio)

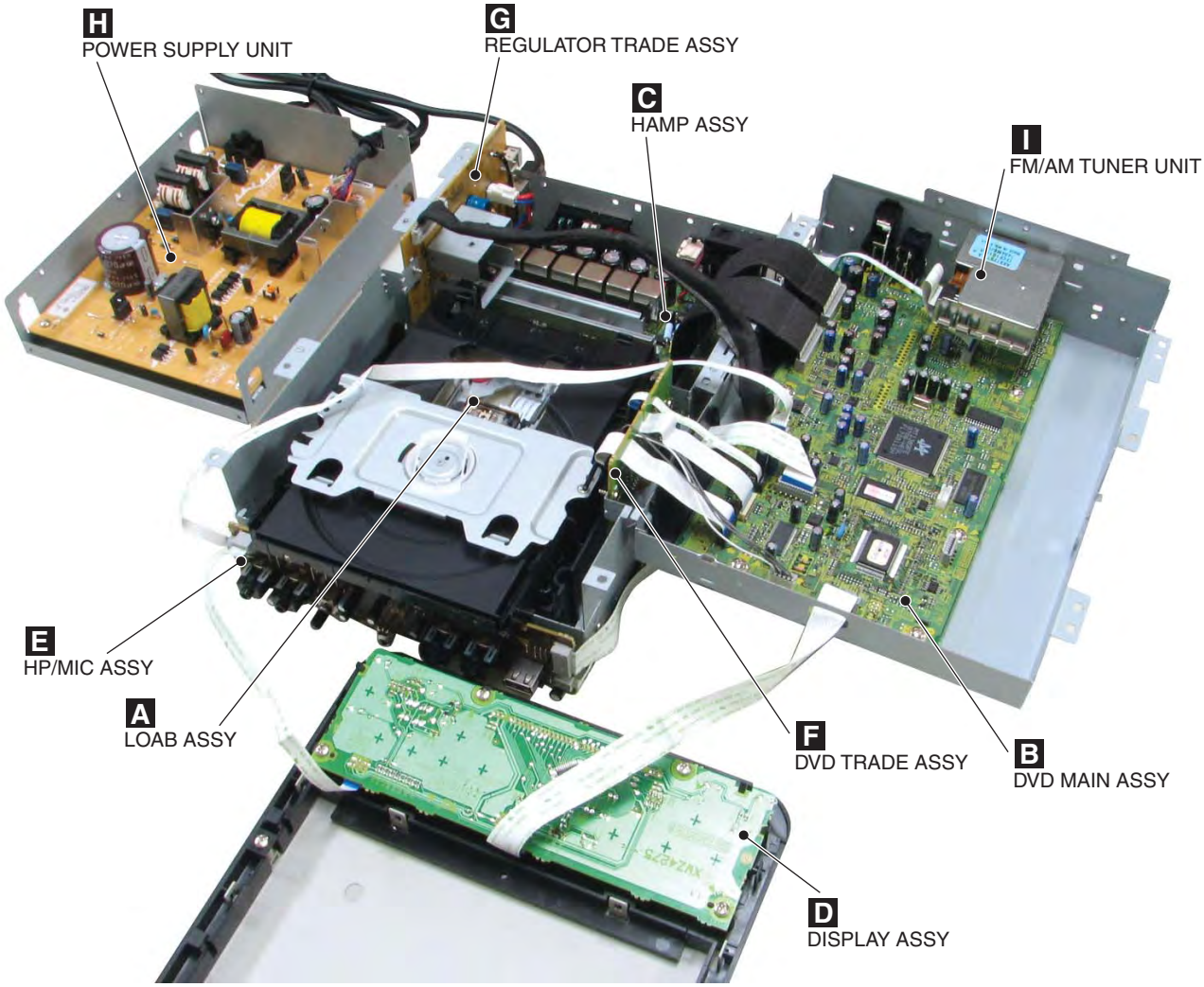
To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedures	Check points
1	Confirm the firmware version on Service Mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complain has been solved. If the customer complain occurs with the specific disc, use it for the operation check.	The customer complain must not be reappeared. Video, audio and operations must be normal.
3	Confirm playback error rates at the innermost and outermost tracks by using the following disc. DVD test disc (GGV1025)	The error rates must be less than 5.0e-4.
4	Play back a CD. (track search)	Audio and operations must be normal.
5	Play back a DVD. (Menu operation, Title/chapter search)	Video, audio and operations must be normal.
6	Check the tuner (AM and FM) operations.	Audio and operations must be normal.
7	Check the sound from headphone output.	Sound must be normal, without noise.
8	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding video and audio:

Item to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Dot noise	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Mottled color	

3.2 PCB LOCATIONS



Mark	No.	Description	Part No.
LIST OF ASSEMBLIES			
	1	LOAB ASSY	VWG2346
	1	HAMP ASSY	XWK3327
	1	DVD MAIN ASSY (GFXJ)	XWM3386
	1	DVD MAIN ASSY (NAXJ5)	XWM3381
	1	DVD MAIN ASSY (NTXJ)	XWM3380
	1	DVD MAIN ASSY (TDXJ/RB)	XWM3379
	1	DVD MAIN ASSY (WLXJ, GXJ/RDDF)	XWM3378
NSP	1	COMPLEX ASSY	XWM3377
	2	DISPLAY ASSY	XWZ4275
	2	HP/MIC ASSY	XWZ4276
	2	DVD TRADE ASSY	XWZ4277
	2	REGULATOR TRADE ASSY	XWZ4278
⚠	1	POWER SUPPLY UNIT	XWR3015
	1	FM/AM TUNER UNIT	AXX7251

3.3 JIGS LIST

■ Jigs list

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	adjustment, diagnosis
DVD Test Disc (DVD-Video)	GGV1025	Check of DVD-Video
CD Test Disc	STD-905	Check of CD
DVD Data Disc	GGV1309	ID data setting
Speaker Cable with terminal	SDS1174 (FL/WHITE) SDS1175 (FR/RED), SDS1176 (SL/BLUE) SDS1177 (SR/GRAY), SDS1178 (C/GREEN)	For checking audio at the SP terminal

■ Lubricants and Glues list

Name	Lubricants and Glues No.	Remarks
Lubricating Oil	GYA1001	Refer to "9.4 06 LOADER ASSY"
Daifree	GEM1036	Refer to "9.4 06 LOADER ASSY"
Silicone Adhesive	GEM1037	Refer to "9.5 TRAVERSE MECHANISM ASSY-S"
Screw tight	GYL1001	Refer to "8.1.5 MECHANISM ADJUSTMENT"

3.4 CLEANING

■ CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup leneses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

A

B

C

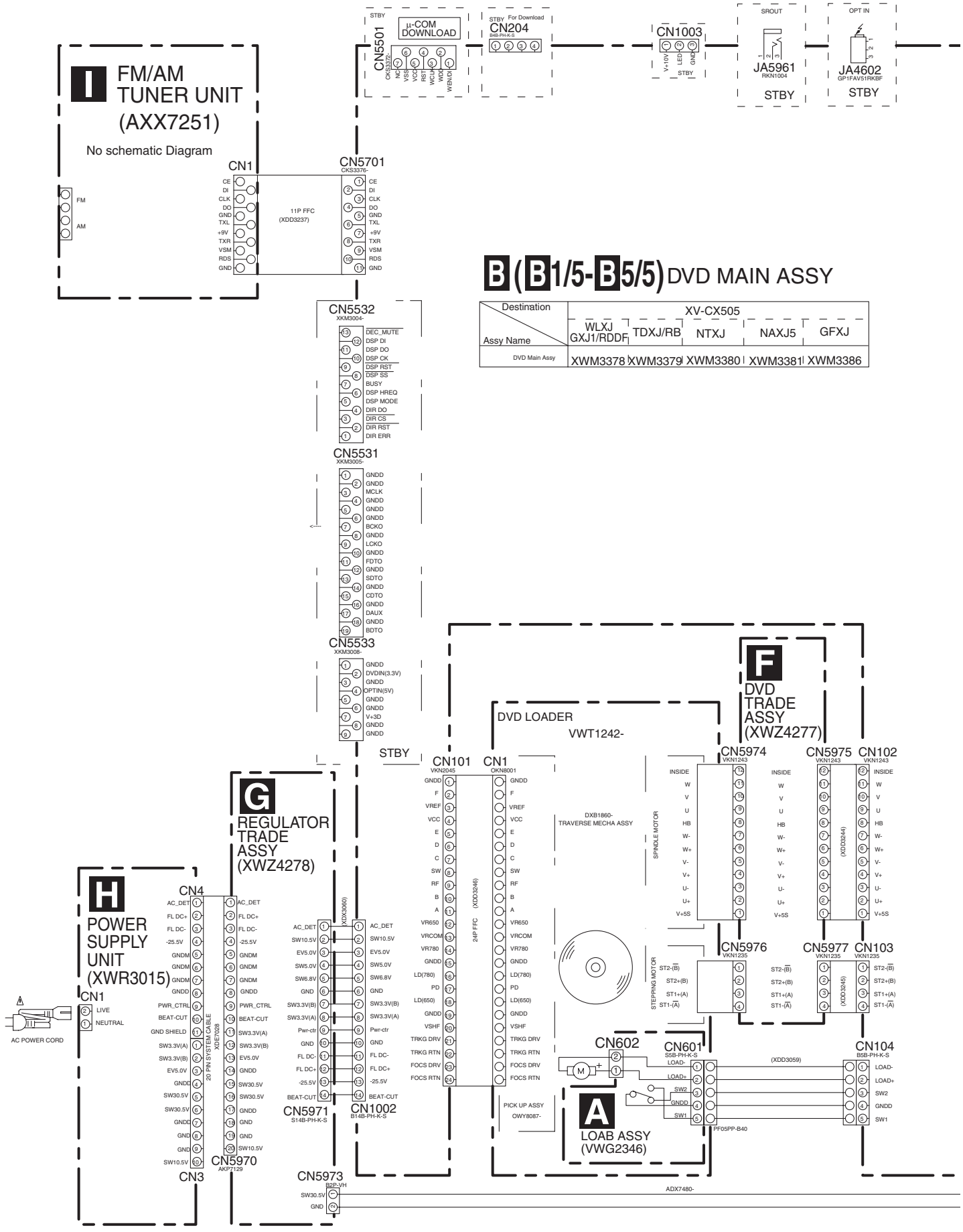
D

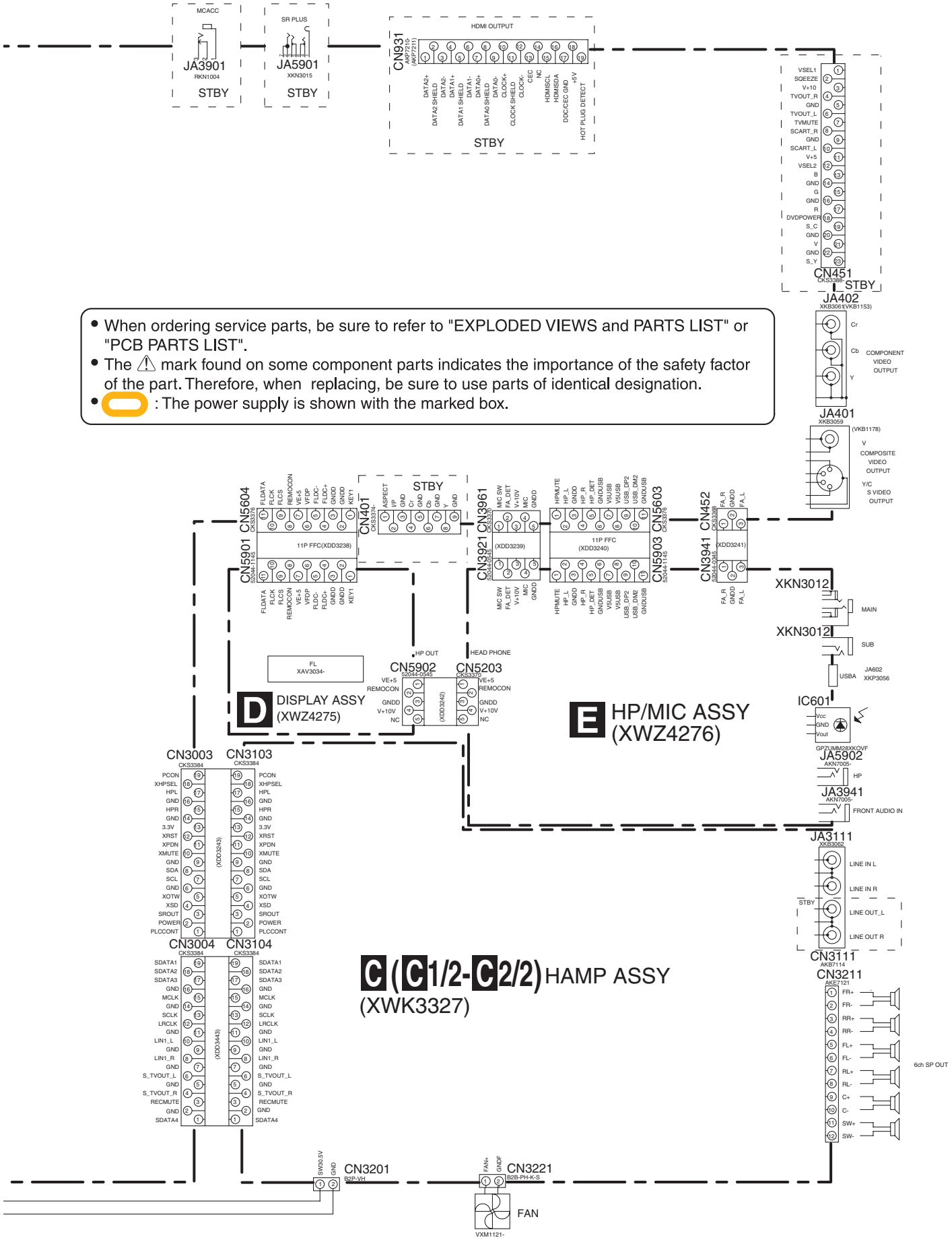
E

F

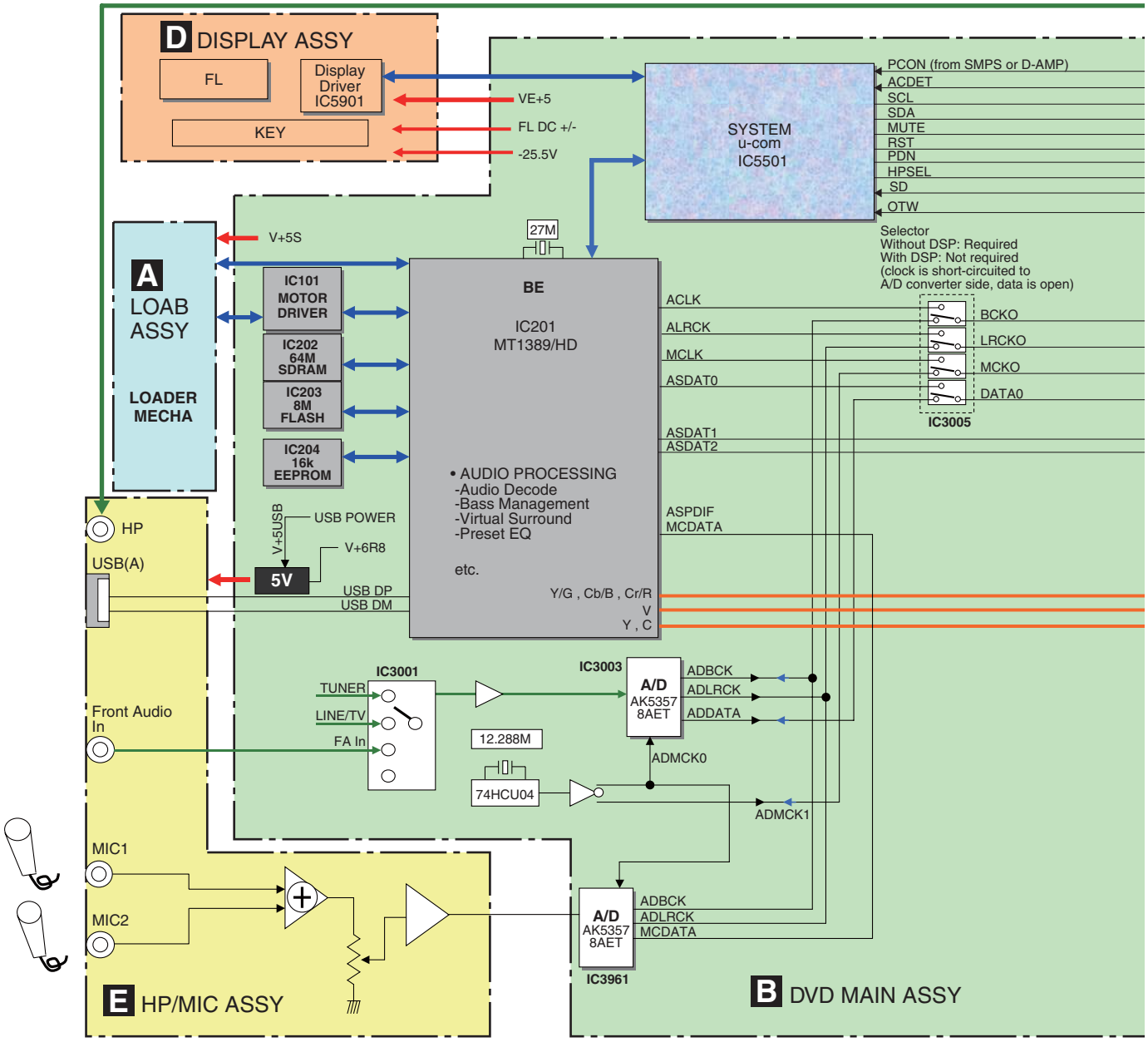
4. BLOCK DIAGRAM

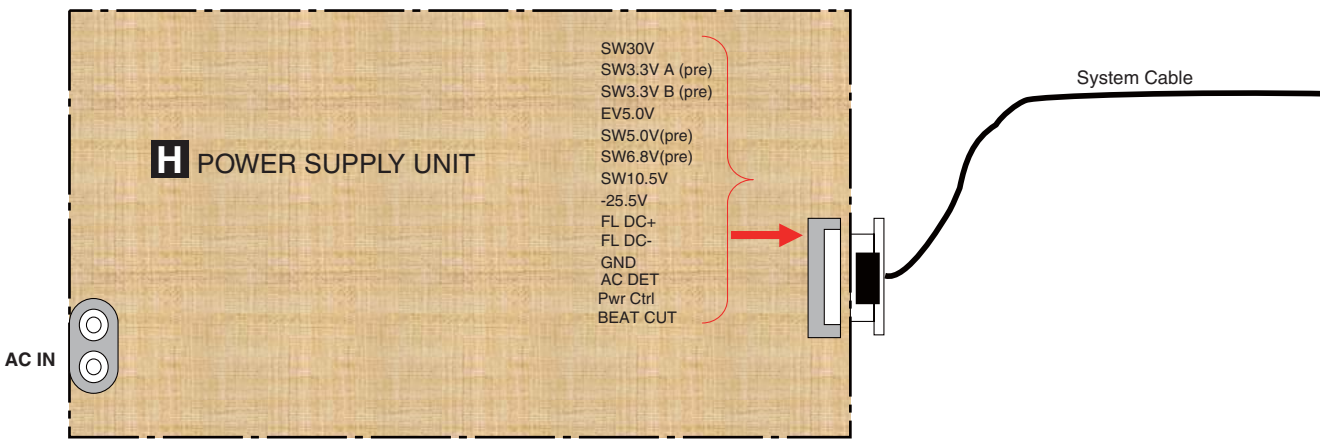
4.1 OVERALL WIRING CONNECTION DIAGRAM and LOAB ASSY

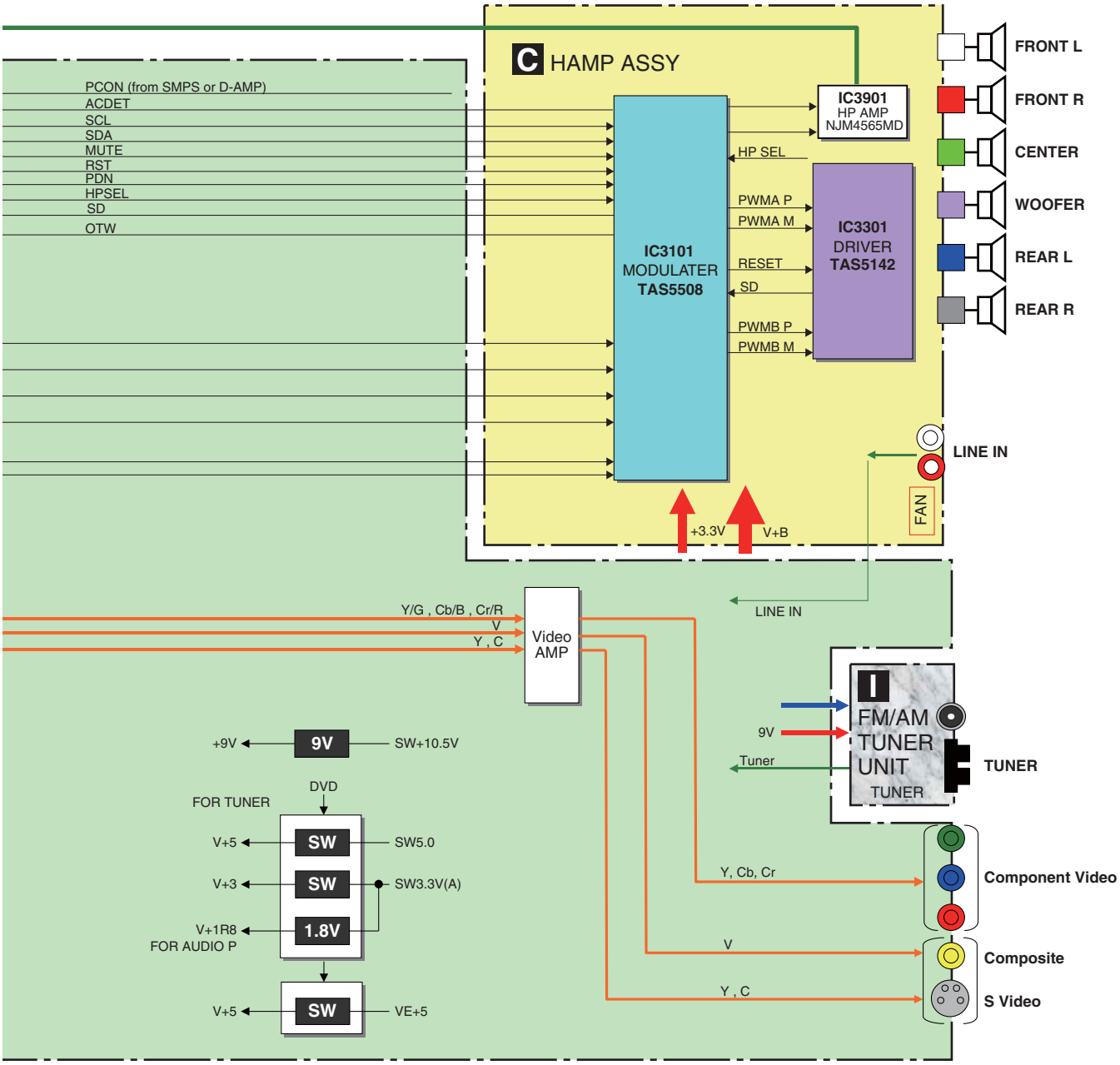



MCACC
JA3901
RKN1004
STBY
SR PLUS
JA5901
XKN3015
STBY
HDMI OUTPUT
CN931
(AKF7211)
STBY
DAT A2+
DAT A2 SHIELD
DAT A2-
DAT A1+
DAT A1 SHIELD
DAT A1-
DAT A0+
DAT A0 SHIELD
DAT A0-
CLOCK+
CLOCK SHIELD
CLOCK-
CEC
NC
HDMISCL
HDMISDA
DDC/CEC GND
+5V
HOT PLUG DETECT
VSEL1
SQEEZE
V+10
TVOUT_R
GND
TVOUT_L
TVMUTE
SCART_R
GND
SCART_L
V+5
VSEL2
B
GND
G
GND
R
DVDPOWER
S_C
GND
V
GND
S_Y
CN451
CKS3388
STBY
JA402
XKB3061(VKB1153)
Cr
Cb
Y
COMPONENT VIDEO OUTPUT
JA401
XKB3059
(VKB1178)
V
COMPOSITE VIDEO OUTPUT
Y/C
S VIDEO OUTPUT
When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
: The power supply is shown with the marked box.
CN5604
CKS3376
CN5901
52044-1145
11P FFC(XDD3238)
FLDATA
FLCK
FLCS
REMOCON
VE+5
VFDP
FLDC-
FLDC+
GNDD
GNDD
KEY1
CN401
CKS3374-
STBY
ASPECT
I/P
GND
Cr
GND
Cb
GND
Y
GND
CN3961
CKS3370
CN3921
52044-0345
(XDD3239)
MIC SW
FA_DET
V+10V
MIC
GNDD
CN5603
CKS3376
11P FFC
(XDD3240)
HPMUTE
HP_L
GNDD
HP_R
HP_DET
GNDUSB
VSUSB
VSUSB
USB_DP2
USB_DM2
GNDUSB
CN452
CKS3388
CN3941
52044-0345
(XDD3241)
FA_R
GNDD
FA_L
XKN3012
MAIN
XKN3012
SUB
USBA
JA602
XKP3056
IC601
Vcc
GND
Vout
GP2UMM28XKOVF
JA5902
AKN7005-
HP
JA3941
AKN7005-
FRONT AUDIO IN
JA3111
XKB3062
LINE IN L
LINE IN R
STBY
LINE OUT_L
LINE OUT R
CN3111
AKB7114
CN3211
AKE7121
FR+
FR-
RR+
RR-
FL+
FL-
RL+
RL-
C+
C-
SW+
SW-
6ch SP OUT
FL
XAV3034-
HP OUT
HEAD PHONE
CN5902
52044-0545
CN5203
CKS3370
VE+5
REMOCON
GNDD
V+10V
NC
(XDD3242)
D DISPLAY ASSY (XWZ4275)
E HP/MIC ASSY (XWZ4276)
CN3003
CKS3384
CN3103
CKS3384
(XDD3243)
PCON
XHPSEL
HPL
GND
HPR
GND
3.3V
XRST
XPDN
XMUTE
GND
SDA
SCL
GND
XOTW
XSD
SROUT
POWER
PLCCONT
CN3004
CKS3384
CN3104
CKS3384
(XDD3443)
SDATA1
SDATA2
SDATA3
GND
MCLK
GND
SCLK
LRCLK
GND
LIN1_L
GND
LIN1_R
GND
S_TVOUT_L
GND
S_TVOUT_R
RECMUTE
GND
SDATA4
C (C1/2-C2/2) HAMP ASSY
(XWK3327)
SW30.5V
GND
CN3201
B2P-VH
FAN+
GNDF
CN3221
B2B-PH-K-S
FAN
VXM1121-

4.2 OVERALL BLOCK DIAGRAM






C HAMP ASSY
PCON (from SMPS or D-AMP)
ACDET
SCL
SDA
MUTE
RST
PDN
HPSEL
SD
OTW
IC3101
MODULATER
TAS5508
IC3901
HP AMP
NJM4565MD
HP SEL
IC3301
DRIVER
TAS5142
PWMA P
PWMA M
RESET
SD
PWMB P
PWMB M
FRONT L
FRONT R
CENTER
WOOFER
REAR L
REAR R
LINE IN
FAN
+3.3V
V+B
Y/G , Cb/B , Cr/R
V
Y , C
Video
AMP
LINE IN
I
FM/AM
TUNER
UNIT
TUNER
9V
Tuner
TUNER
+9V
9V
SW+10.5V
DVD
FOR TUNER
V+5
SW
SW5.0
V+3
SW
SW3.3V(A)
V+1R8
FOR AUDIO P
1.8V
V+5
SW
VE+5
Y, Cb, Cr
Component Video
V
Composite
Y , C
S Video
to Digital AMP
to DVD Main
IC5971
3.3V
SW 3.3V A
IC5970
3.3V
SW 3.3V B
IC5973
5.0V
SW 5.0V
IC5972
6.8V
SW 6.8V
SW30V
SW3.3V A
SW3.3V B
EV5.0V
SW5.0V
SW6.8V
SW10.5V
-25.5V
FL DC+
FL DC-
GND
AC DET
Pwr Ctrl
BEAT CUT
G REGULATOR TRADE ASSY

5. DIAGNOSIS

5.1 METHOD FOR DIAGNOSING DEGRADATION OF THE LDS ON THE PICKUP

Case when this diagnosis is required :
When playback of any disc, including a test disc (DVD: GGV1025, CD: STD-905), won't play or doesn't play

How to diagnose

In the case mentioned above, degradation of the laser diodes (LDs) mounted on the 06SD Pickup Assy-S is suspected. Measure the voltage between the two ends of one of the resistors mentioned below.

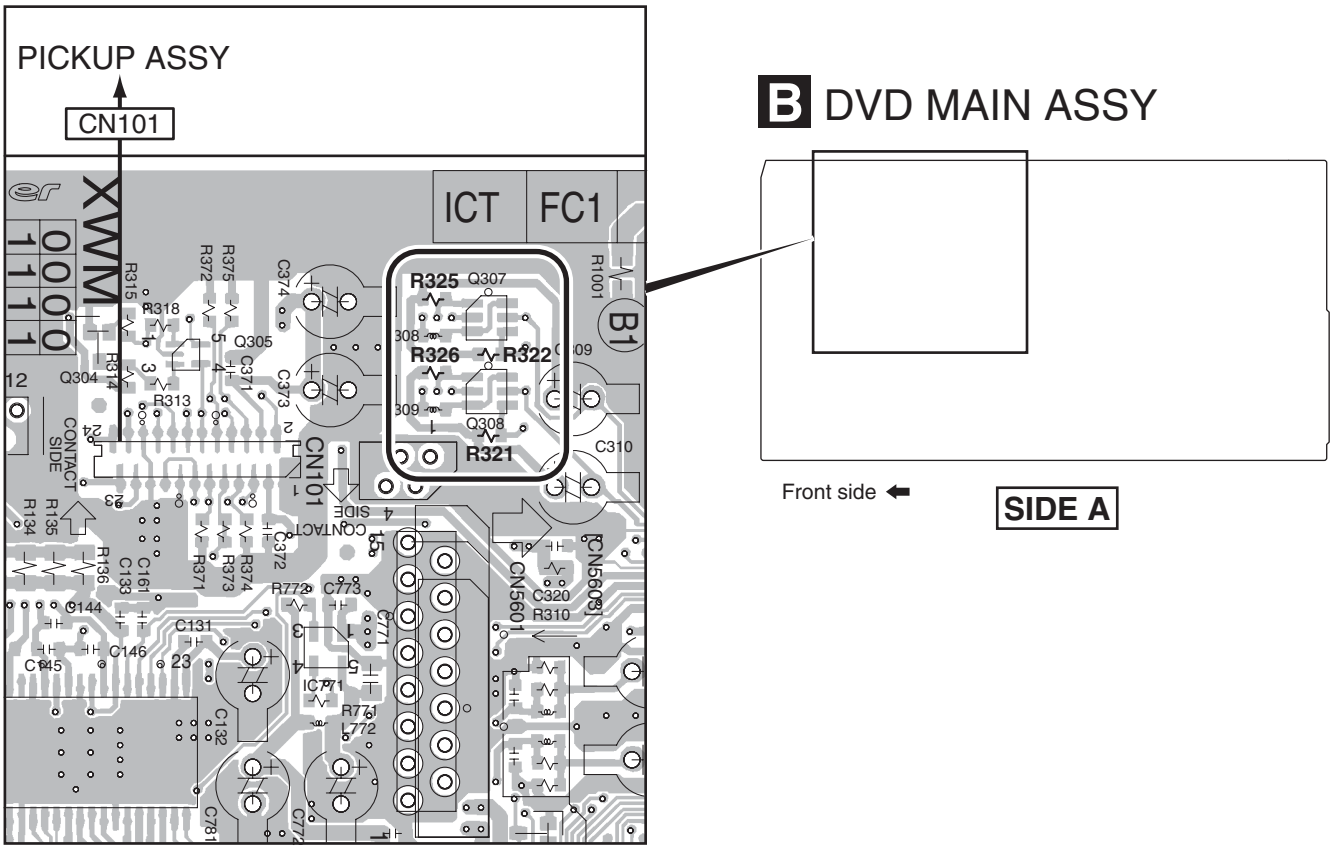
- **No playback of a DVD :**

  Measure the voltage between the both ends of R322 or R325 on the DVD MAIN Assy. If the voltage is 0.4 V or higher, the 650-nm LD is degraded.

- **No playback of a CD :**

  Measure the voltage between the both ends of R321 or R326 on the DVD MAIN Assy. If the voltage is 0.4 V or higher, the 780-nm LD is degraded.

If the measurements show degradation of an LD, replace the 06SD Pickup Assy-S.



5.2 DVD TROUBLE SHOOTING

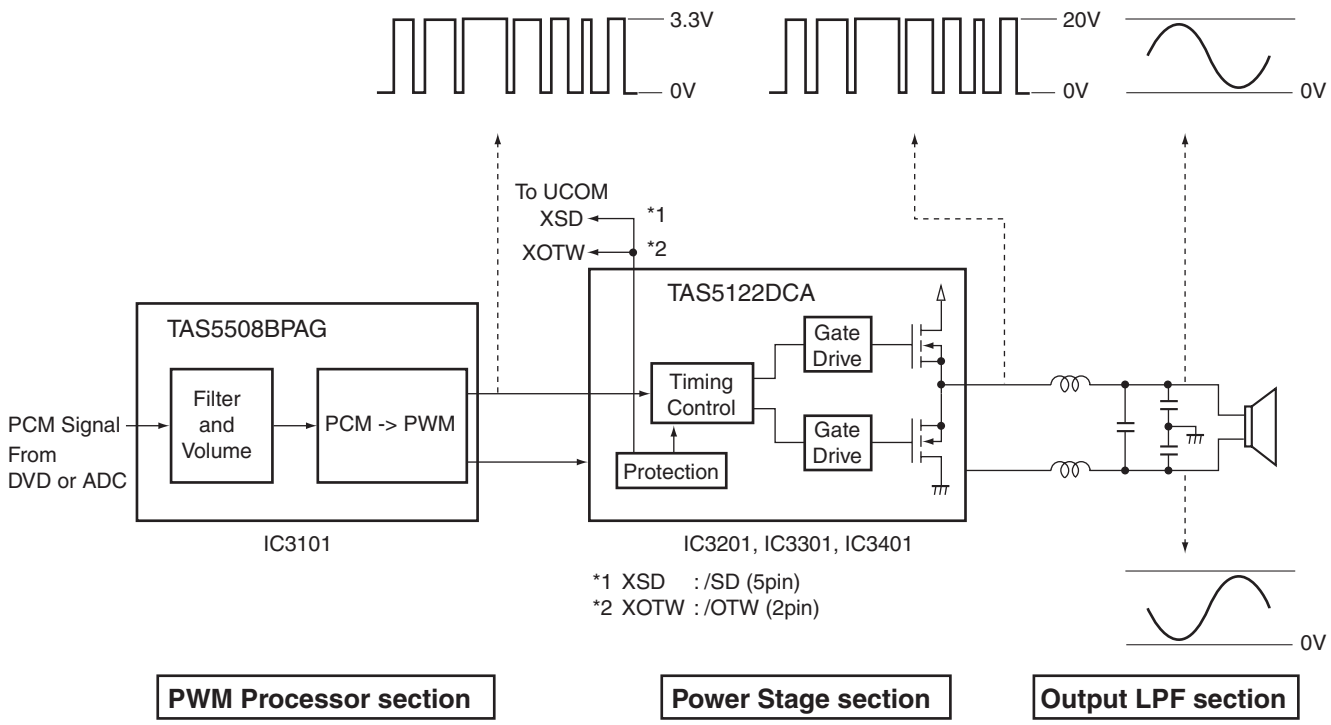
No.	Symptoms	Diagnosis Contents	Possible Defective Points
1	The power is not turned on.	Are wires of output connector (POWER SUPPLY Unit) and CN1001 (DVD MAIN Assy) disconnected or damaged ?	Connector / cable
		Check that the following voltage is output : Q1202-source on the DVD MAIN Assy: 3.3V	**POWER SUPPLY Unit**
2	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Are the signals output from IC201-pin 97 (MDATA) and pin 98 (SCLK) on the DVD MAIN Assy ? (in the range of 0-3V)	**DVD MAIN Assy** DVD IC (IC201)
		Are the signals input into IC5501-pin 50 (MDATA) and pin 51 (SCLK) on the DVD MAIN Assy ? (in the range of 0-3V)	**DVD MAIN Assy** UCOM (IC5501)
		Check that the following voltage are output : Q1302-collector on the DVD MAIN Assy: 5V	**DVD MAIN Assy** 5V Regulator IC (IC751)
		Is a resonator (X201: 27MHz) on the DVD MAIN Assy oscillating ?	**DVD MAIN Assy** Crystal resonator (X201) DVD IC (IC201)
		• Is a signal input into IC203-pin26 (PCE#) on the DVD MAIN Assy ? (Is a signal "H" for 80 mS and then "L" after the power is turned on ?) -> Communication with flash ROM. • Are the signals input into IC202-pin 16 (DWE#), pin 19 (DCS#) and pin 38 (SDCLK) on the DVD MAIN Assy ? (Is a signal fluctuating ?) -> Communication with SDRAM	**DVD MAIN Assy** DVD IC (IC201) Flash ROM (IC203) SDRAM (IC202)
		Is a signal output from IC203-pin 28 (PRD#) on the DVD MAIN Assy? (Is a signal fluctuating for several hundred mS after the power is turned on ?)	**DVD MAIN Assy** Flash ROM (IC203)
		Is a signal input into IC5501-pin 67 (DVD ACK) on the DVD MAIN Assy ? (Is a signal fluctuating ?) -> Communication with FL Control IC	**DVD MAIN Assy** DVD IC (IC201) UCOM (IC5501)
		Is a signal output from IC5501-pin 78 (XREADY) on the DVD MAIN Assy ? (Is a signal fluctuating in the range of 0-5V ?)	**DVD MAIN Assy** UCOM (IC5501)
		Are the signals output from IC5501-pin 49 (SDATA) on the DVD MAIN Assy ? (in the range of 0-5V)	**DVD MAIN Assy** DVD IC (IC201) UCOM (IC5501)
		Are the signals of IC204-pin 5 (SDA) and pin 6 (SCL) on the DVD MAIN Assy fluctuating for one or two seconds after the power is turned?	**DVD MAIN Assy** EEPROM (IC204)
3	An opening screen is not displayed on the monitor (The FL display lights. The mechanism works.)	Check the video signal path between DVD IC (DVD MAIN Assy IC201) and video-out terminal (see the block diagram)	**DVD MAIN Assy** Video circuitafter DVD IC (IC201)

No.	Symptoms	Diagnosis Contents	Possible Defective Points
4	A tray cannot be opened. (An opening screen is displayed on the monitor)	Does the voltage of CN104-pin 3 and pin 5 on the DVD MAIN Assy change normally ? Pin 3 (SW2(TRIN)): Tray is fully closed: "L" Pin 5 (SW1(TROUT)): Tray is fully opened: "L"	**LOAB Assy** Tray SW (S101)
		Is the signal input into IC101-pin 11 (TROPEN) on the DVD MAIN Assy? At open: 3.3V, At close: 0V	**DVD MAIN Assy** DVD IC (IC201)
		Are the signals output from IC101-pin 1 and pin 2 (CN103-pin 1 and pin 2) on the DVD MAIN Assy ? Pin 2: Approx. 6V during opening tray approx. 0V during closing tray. Pin 1: Approx. 0V during opening tray approx. 6V during closing tray.	**DVD MAIN Assy** FTS Driver IC (IC101)
		Are wires of CN104 and CN103 on the DVD MAIN Assy disconnected or damaged ?	Connector / cable
		Does the voltage of CN102-pin 1 on the DVD MAIN Assy change to 0V by pressing the Inside switch.	Inside switch
5	Playback impossible (no focusing)	Are the signals output from IC101-pin 3 (FOCS_DRV) and pin 4 (FOCS_RTN) on the DVD MAIN Assy ?	**DVD MAIN Assy** FTS Driver IC (IC101)
		Does 650-nm LD emit light ? Does a pickup lens move up / down ? Does an actuator spring bend ?	Pickup
		Are plastic parts damaged ? Or is a shaft detached ? Is the turntable detached or tilted ?	Mechanism section (motor)
		Is flexible cable of CN101 on the DVD MAIN Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 42 (FOSO) on the DVD MAIN Assy ? (Device control of about 1.4 V is output usually. It is fluctuated by about 250 mV with focus up / down.)	**DVD MAIN Assy** DVD IC (IC201)
6	Playback impossible (Spindle does not turn)	Are the signals output from IC101-pin 30 (W), pin 33 (V) and pin 35 (U) on the DVD MAIN Assy ? Is pin 26 (STBY) fixed LOW ? (pin 26 is High at playback: 3V)	**DVD MAIN Assy** FTS Driver IC (IC101)
		Is there any part detached from the spindle motor ? Or Is there any foreign object lodged in it ?	Mechanism section (Spindle motor)
		Are wires of CN102 on the DVD MAIN Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 37 (DMSO) on the DVD MAIN Assy ?	**DVD MAIN Assy** DVD IC (IC201)
7	Playback impossible (Playback stops)	Does 650-nm LD deteriorate ? If the voltage at each both ends of R322 and R325 on the DVD MAIN Assy is 0.4 V or more, the 650-nm LD is definitely deteriorated.	650-nm LD deteriorated. (When playback of a DVD is impossible)
		Does 780-nm LD deteriorate ? If the voltage at each both ends of R321 and R326 on the DVD MAIN Assy is 0.4 V or more, the 780-nm LD is definitely deteriorated.	780-nm LD deteriorated. (When playback of a CD is impossible)
		Is there abnormality in FG waveform ? (IC201-pin 50)	**DVD MAIN Assy** FG output : FTS Driver IC (IC101)
		Are there scratches or dirt on the disc ?	Disc
8	Picture disturbance during playback (block noise, freeze, other)	Are there scratches or dirt on the disc ? Is there a problem with the format of the disc ?	Disc
		Check the video signals. Composite video signal (IC401-pin 25) S video signal (IC401-pin 21, pin 26) RGB video signal (IC401-pin 16, pin 18, pin 20)	**DVD MAIN Assy** DVD IC (IC201) Video IC (IC401, IC451)
9	No sound (Picture is normal)	Check the waveform (ALCK : IC201-pin 212), (ALRCK : IC201-pin 209), (ABCK : IC201-pin 210), (ASDATA0 : IC201-pin 197).	**DVD MAIN Assy** DVD IC (IC201)

● Symptoms that may occur when any of the following ICs is in failure

IC	Symptoms
EEP ROM (DVD MAIN Assy : IC204)	User's data cannot be stored in memory. The ID number is lost.
Flash ROM (DVD MAIN Assy : IC203)	The power cannot be turned on. Downloading of the firmware cannot be performed.
DVD IC (DVD MAIN Assy : IC201)	Any kind of symptoms (no power, a failure in any of the servo, video and audio systems, etc.) may be generated, because the DVD processing is performed by a single chip.
64M SDRAM (DVD MAIN Assy : IC202)	No power. Block noise is generated during playback.

5.3 CIRCUIT DESCRIPTION OF DIGITAL AMP. SECTION



PWM Processor section

The PCM signals output from the DVD decoder or AD converter are input to this section, and their volume and sound quality are digitally adjusted. At the output stage, after conversion from PCM to PWM, the signals are output to the Power stage.

Power Stage section

In this section, timing is controlled so that the MOSFETs on the high and low sides will not be turned on simultaneously. The voltage of the PWM signals are raised to drive the gates of the MOSFET, and the PWM signals to drive the speakers are output from the MOSFET at the output stage. Detection and protection functions against short-circuiting of the output signals and temperature exceeding the standard value are also provided.

If the detection and protection work, the ports of the power stage ICs become the following state.

Power Stage ICs No.	Protection Enable State
IC3201 IC3301 IC3401	/SD (5pin)
	/OTW (2pin)

Output LPF section

The carrier elements, high-frequency signals that are unnecessary for these speakers, are eliminated. The signals passed through the LPF will become sine-wave signals, as shown in the figure above.

5.4 SPECIFICATIONS FOR THE PROTECTION CIRCUITS FOR THE DIGITAL AMPLIFIER

The protection circuits for the Digital Amplifier are activated, following the specifications shown below. The error indication on the FL display shows the reason a protection circuit was activated.
Upon diagnosis of the Digital Amplifier, refer to the specifications for the protection circuits here and the overview of the Digital Amplifier circuitry.

1. Overview

The system microcomputer monitors the ports for shutdown requests (Pin 23:SD_AB and Pin 24: SD_CD) and the ports for abnormal-temperature detection (Pin 25: /OTW) of the Power Stage ICs (IC3201, IC3301, and IC3401). As soon as any abnormality is detected, it shuts the unit down.
To notify the user of the possibility of a too high a volume, when the unit is turned on the next time, the volume level will be set to 0, and an error message will be displayed on the FL display.

2. Ports on the system microcomputer to be used for detection

Pin 77: SHUTDOWN
Low voltage at this pin means overcurrent or voltage too low (= V+B) at a Power Stage IC.

Pin 79: XOTW
Low voltage at this pin means the temperature at the Power Stage ICs exceeded 125°C.

Note: As one Power Stage IC is provided with two channels, three Power Stage ICs (in total 6 channels) are mounted in this unit. For abnormality detection, the unit implements a logical OR operation regarding these three ICs. Therefore, which IC is abnormal cannot be known directly. To find which IC is abnormal, it is required to check the PWM outputs (35, 38, 47, 50 pin) of the each power stage ICs (IC3201, IC3301, IC3401).

3. Detection timing

Start : Detection starts 500 ms after the PWRCONT port (Pin 84) of the system microcomputer becomes active by your pressing the STANDBY/ON key.

Finish : When the STANDBY/ON key is pressed again (when the power-off process starts).

4. Operation of the protection circuits

The following three protection circuits are activated when the conditions shown below are met:

Overcurrent detection: Indication on the FL display: OC ERR1
Conditions: If the SHUTDOWN ports, which are monitored every 10 ms, become low 7 times in succession

Abnormal temperature detection 1: Indication on the FL display: OVERTEMP
Conditions: If the XOTW ports, which are monitored every 10 ms, become low in succession for one minute.

Abnormal temperature detection 2: Indication on the FL display: OVERTEMP
(Prerequisite: The XOTW ports, which are monitored every 10 ms, become low three times in succession.)
Conditions: The above prerequisite is upheld, and the conditions for an overcurrent detection are met.

Abnormal temperature detection 3: Indication on the FL display: OC ERR2
Conditions: The PCONFIG ports (21-pin), which are monitored every 30 ms, become more than 2Vrms more than 45% in one minute.

5. Process when the protection circuits are activated

The unit is shut down within 30 ms after abnormality detection then the volume level is set to 0. The unit can be turned on immediately after the shutdown.

6. SERVICE MODE
6.1 TEST MODE

■ Test Mode Functional Specification

① Test mode entry

In the power ON state, press the [ESC] key and [TEST] key in order of the Test mode remote control unit (GGF1381).

- OSD displays test mode.

② LD ON

Enter the test mode.

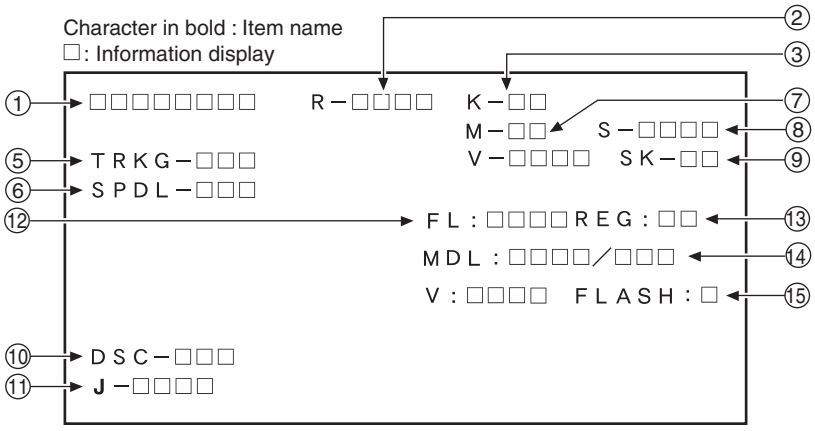
DVD : Press the [TEST] and [1] keys in order, and turn on the laser diode (650 nm).

CD : Press the [TEST] and [4] keys in order, and turn on the laser diode (780 nm).

③ Release the Test mode

- Turn off the power.
- Press the [ESC] key of the remote control unit and reset it.

6.2 DISPLAY SPECIFICATION OF THE TEST MODE



① **Address indication**
The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)
[* * * * * * * *]
CD : ID indication [* * * * * * * *]

② **Code indication of remote control unit [R – * * * *]**
In case of double code, display a 2nd code.

③ **Main unit keycode indication [K – * *]**

⑤ **Tracking status [TRKG – * * *]**
Tracking on : [ON]
Tracking off : [OFF]

⑥ **Spindle status [SPDL – * * *]**
CLV : [CLV]
Off : [OFF]

⑦ **Mechanism (loading) position value [M – * *]**
Unknown : [01] or [41]
Open state : [04]
Close state : [08]
During opening : [12]
During closing : [22]

⑧ **Slider position [S – * * * *]**
In Side Switch ON : [01]
In Side Switch OFF: [00]

⑨ **Output video system [V – * * * *]**
NTSC system : [NTSC]
PAL system : [PAL]
Automatic setting: [AUTO]
Scart terminal output [SK – * *]
(Display only the WY model which can do the output setting of scart terminal.)
VIDEO : [00]
S-VIDEO : [01]
RGB : [02]

⑩ **Disc sensing [DSC – * * *]**
The type of discs loaded is displayed.
[DVD], [CD]

⑪ **Jitter value [J – * * * *]**
Note: Don't use it.

⑫ **Version of the FL controller [FL: * * * *]**
Note: Don't use it.

⑬ **Region setting of the player [REG: *]**
Setting value : [1] to [6]

⑭ **Destination setting of the FL controller [MDL: * * * * / * * *]**
Four characters in the front represent code 01.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RL/RD, RAM : /RAM, LB: /LB, WY: /WY

⑮ **Version of the flash ROM [V: * *. * *]**
Flash ROM size [FLASH = * *]

6.3 FUNCTIONAL SPECIFICATION OF THE SHORTCUT KEY

Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Conditions	Remote Control Key Name
Memory clear and region / revision indication		CLEAR (*1)
Average value measurement of DVD error rate		5 (*1)
CD error rate measurement		5 (*1)
Progressive OFF	Only for progressive models	R_SKIP
Progressive ON		F_SKIP
FL indication of ID number		STEREO (*1)
ZOOM ON (x4)		ZOOM
Service mode indication (error rate indication, etc.)		CHP/TIM (*1)
Model information indication		CHAP (*1)
Title search Input mode IN Title No. input Search execution		SIDE A (*1) Numbers (*1) PLAY (*1)
Region confimation mode		A.MON (*1) Numbers (*1)

*1 : Test mode remote control unit

• Service mode indication (ESC + CHP/TIM keys)
ID Address
The error rate is always displayed in exponential notation, e.g., *.* * e - *, for both DVDs and CDs.
EDC/ID/AV 1 error history (ID Address, EDC/ID Error, last eight errors)

• Calculation of the average error rate (ESC + "5" [Test mode remote control unit] keys)
The average of the last eight error rates is calculated and indicated in exponential notation. After the calculation is completed, "OK" or "NG" is displayed. If "NG" is displayed, the disc tray will open (for both DVDs and CDs)
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

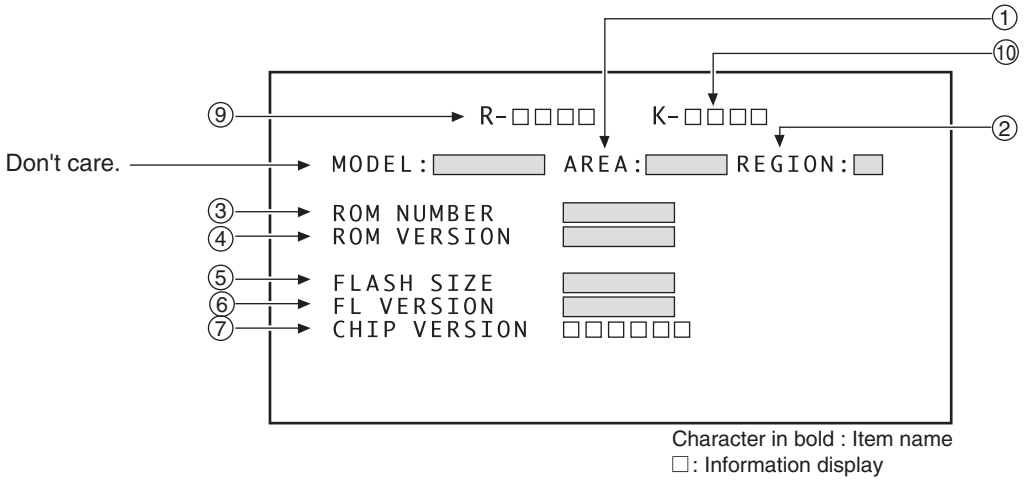
• Indication of model information (ESC + CHAP keys)
The items from 12 to 15 of the TEST MODE Indications are displayed. However, in the indications, S in the standard test mode is changed to CHIP VERSION, and M is changed to RF VERSION. For details, see 6.4.

• Region confirmation mode (ESC + A.MON [Test mode remote control unit] + "1"-"8" [Test mode remote control unit] keys)
After you press the AUDIO key while holding the ESC key pressed and then input the region number, if the number is different from that set in the unit, an error message is displayed, and the tray opens.

6.4 SPECIFICATION OF MODEL INFORMATION DISPLAY

To display model information : Press the ESC key then the CHAP key.
To close the model information display : Press the ESC key.

• Display contents



① **Destination indication**
Display it according to model information set from the FL controller.
② **Region No.**
③ **Part number**
④ **ROM version**
⑤ **Flash size**

⑥ **FL controller version**
⑦ **CHIP VERSION**

⑨ **Remote control code**
⓪ **Key code of Main unit**

6.5 FUNCTIONAL SPECIFICATION OF THE SERVICE MODE

• Display during Service Mode

To enter Service Mode, press the CHP/TIM key while holding the ESC key pressed.
To quit, press the ESC key.

Service mode display

① ID Address

② Error rate (always displayed), in exponential notation

ERROR RATE : * * * * * * *
(* * * *)
Number of error

• Calculation of the average error rate
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

ex) For DVDs

• Step 1		• Step 2	
△△e - □		△△e -4	
△△e -6	: OK	3.0e -4	: OK
△△e -5	: OK	4.0e -4	: OK
△△e -4	: Refer to Step 2	5.0e -4	: OK
△△e -3	: NG	6.0e -4	: NG
△△e -2	: NG	7.0e -4	: NG

③ EDC/ID error history (ID Address, EDC/ID errors, last eight errors)

Note:
* Error of AV1 is not supported in this player.

Indication plan contents

Character in bold : Item name
□: Information display

6.6 SERVICE TEST MODE

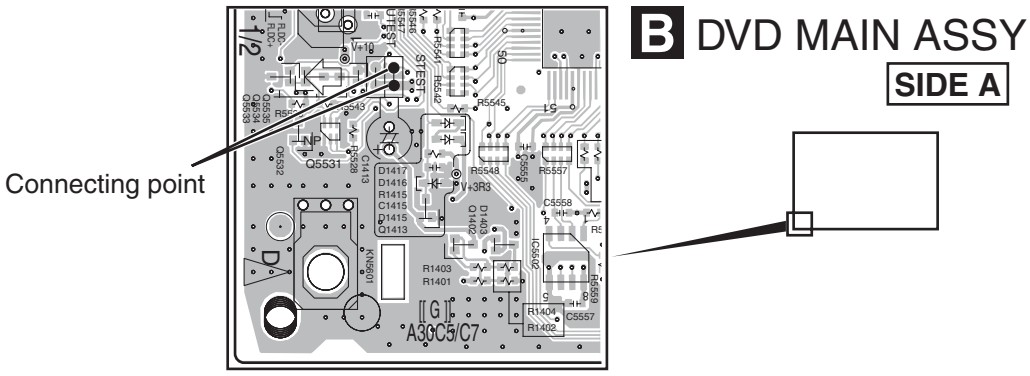
1. Conditions During Service Test mode

- VDET does not operate (ignore)
- PROTECT does not operate (ignore)
- Even if the unit is urgently shut down due to failure in normal mode, it can be POWER ON without waiting for one minute.

2. How to enter Service Test mode

- Connect AC power cord with the STEST port (microcomputer terminal IC5501: 43-pin) at High (5 V).
  (See "Service Test mode connecting point".)
  Note: Initial function setting is DVD/CD.

■ Service Test Mode connecting point



3. Indications on the FL display when Service Test mode is entered

- Indications on the FL display when Service Test mode is entered differ depending on whether the unit was turned off normally or shut down for emergency protection, immediately before Service Test mode starts, as follows:

[After a normal power-off]

FL display WELCOME
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown caused by an AMP-system failure]

FL display PRTCT E
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown caused by a DVD-system failure]

FL display DVDPRTCT
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown caused by an EEPROM (IC5502) failure]

FL display EEP ERR
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown caused by high-temperature detection]

FL display OVERTEMP
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown 1 caused by over current detection]

FL display OC ERR 1
⇩
FL display VOL 0
⇩
FL display DVD SERV

[After a shutdown 2 caused by over current detection]

FL display OC ERR 2
⇩
FL display VOL 0
⇩
FL display DVD SERV

4. How to quit Service Test mode, and conditions for quitting

- To quit Service Test mode, turn the power off or disconnect the AC power cord to turn the power off.
- When Service Test mode is quit, only data on protection in RAM will be initialized, and data on user settings in RAM will not be initialized.

5. Operations during Service Test mode

• Basically, operations in Service Test mode are the same as in Normal mode. However, to indicate that the unit is in Service Test mode, the following are displayed when the functions are changed:

[Functions]	[FL display]
DVD/CD	DVD SERV
USB	USB SERV
TUNER	TX SERV
LINE	LN SERV

6. Failures

• Depending on the types of errors, one of the following error messages will be displayed when the unit is turned on:

PRTCT E

A protection circuit was activated:

1. The V+10, V+5, V+3R3 or V+6R8 was short-circuited (See the protection circuit on "10.2 DVD MAIN ASSY (2/5)"), or the value at V+10, V+5, V+3R3 or V+6R8 exceeded the standard value because of an abnormality in its power section.
2. The XPROTECT port (22-pin) line up to the system-control computer (IC5501) was short-circuited by grounding or was broken.

DVDPRTCT

Abnormality in the DVD section

1. The V+5V or V+3 was short-circuited, or the value at V+5V or V+3 exceeded the standard value because of an abnormality in its power section.
2. The VDET port (17-pin) line up to the system-control computer (IC5501) was short-circuited by grounding or was broken. (See VDET circuit on "10.2 DVD MAIN ASSY (2/5)")

EEP ERR

1. Breakage or short-circuiting of the communication line (EEP_DI, EEP_SK, EEP_DO, EEP_CS) between the system-control computer (IC5501) and the EEPROM (IC5502) can be suspected.
2. A failure in the EEPROM (IC5502) can be suspected.

OC ERR 1

- If the unit can be turned on in Normal mode and the error display does not appear, abnormality is not found.
- When the error display is generated again, the following causes might be possible.
  1. Power Stage IC in H-DAMP ASSY could be defective.
  2. It is short-circuited from above-mentioned Power Stage IC to the speaker terminal.
  3. The line of XSD is shorted or disconnected from Power Stage IC to the system-control computer.

OC ERR 2

- If the unit can be turned on in Normal mode and"OC ERR 2" does not appear, abnormality is not found. (The volume is lowered and Extra power is turned off and Channel level is reduced)
- When the error display is generated again, the following cause might be possible.
  1. The line of PCON is shorted to VDD.

OVERTEMP

- If the unit can be turned on in Normal mode and"OVERTEMP" does not appear, abnormality is not found. (The volume is lowered and a temporary rise in heat might be a possible cause.)
- When "OVERTEMP" appears again, the following causes might be possible.
  1. Power Stage IC in AMP ASSY could be defective.
  2. The line of XOTW is shorted or disconnected from Power Stage IC to the system-control computer.

7. Accumulated power-on time display

- Hold the STOP key on the unit pressed for 8 seconds during Service Test mode. After the version for the system-control computer is displayed, the accumulated power-on time is displayed.

Version of the system-controller `PDC159A`

⇩ About 3 seconds after

Accumulated power-on time `10H30M`

- Power-on time is always counted while the power is on, regardless of unit's functions and operations. However, it is not counted during Standby mode.
- The maximum countable power-on time is 255H59M (255 hours 59 minutes.) The indication will not advance beyond that.
- The accumulated power-on time basically cannot be cleared.

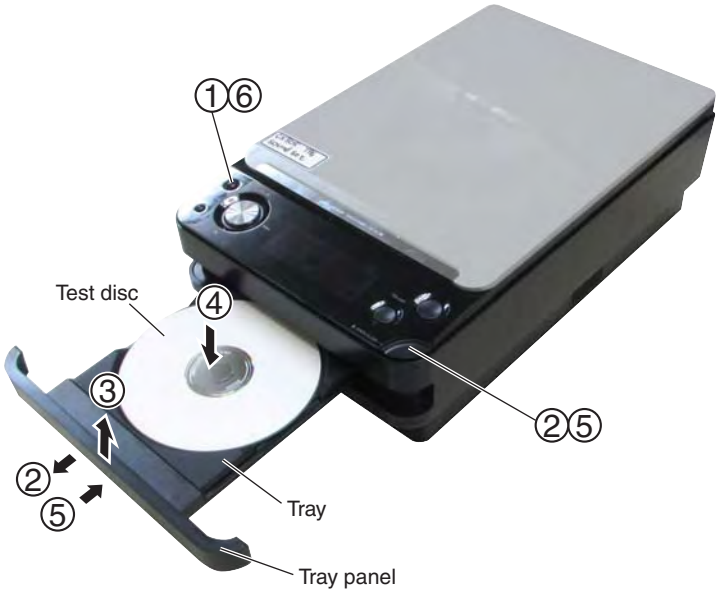
7. DISASSEMBLY

Note 1: Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
Note 2: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of PCB's

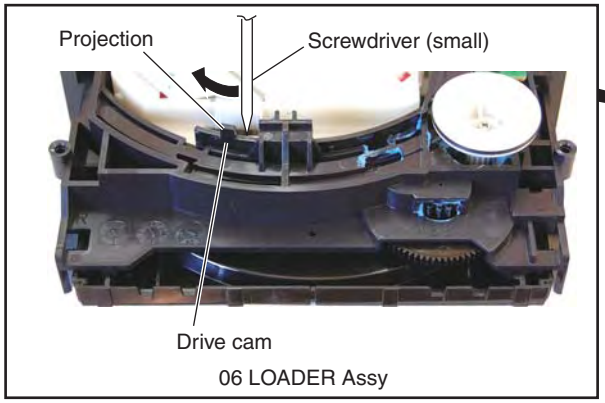
1 Tray Panel

① Press the ⏻ STANDBY/ON button to turn on the power.
② Press the ⏏ OPEN/CLOSE button to open the Tray.
③ Remove the Tray Panel.
④ Set the test disc.
⑤ Press the ⏏ OPEN/CLOSE button to close the Tray. (Test disc is clamped.)
⑥ Press the ⏻ STANDBY/ON button to turn off the power.
⑦ Pull out the Power cord.

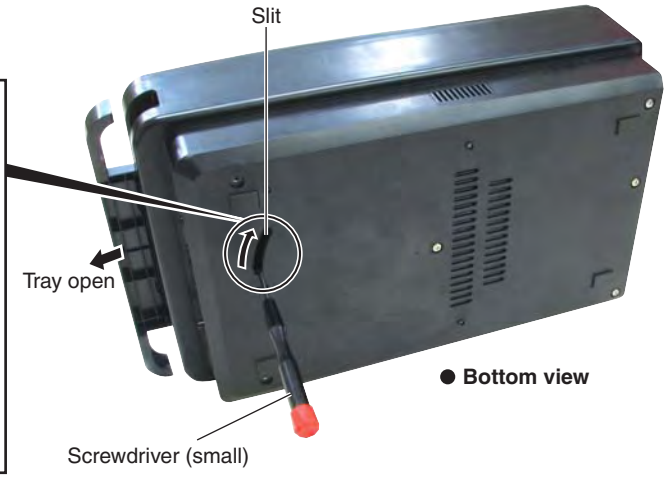


How to open the tray when the power cannot be on

Insert a screwdriver (small) into the slit located at the bottom of the unit, and slide the projection of the drive cam in the 06 LOADER Assy in the direction of the arrow, as indicated in the photo. If the tray pops out a little, fully pull it out by hand.



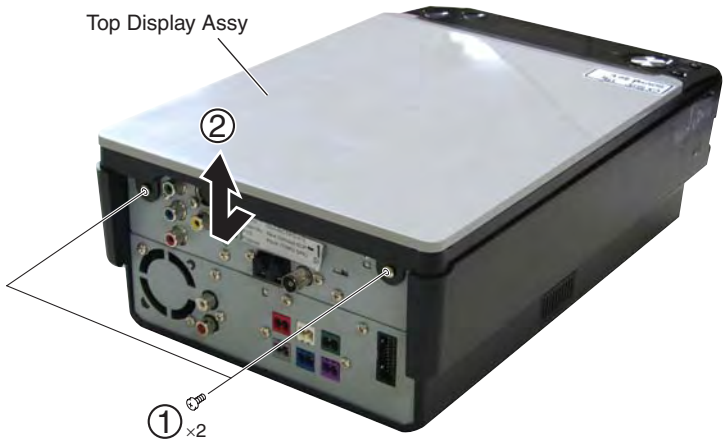
● **Bottom view**



● **Bottom view**

2 Top Display Assy

① Remove the two screws.
② Move the Top Display Assy to rearward to remove.

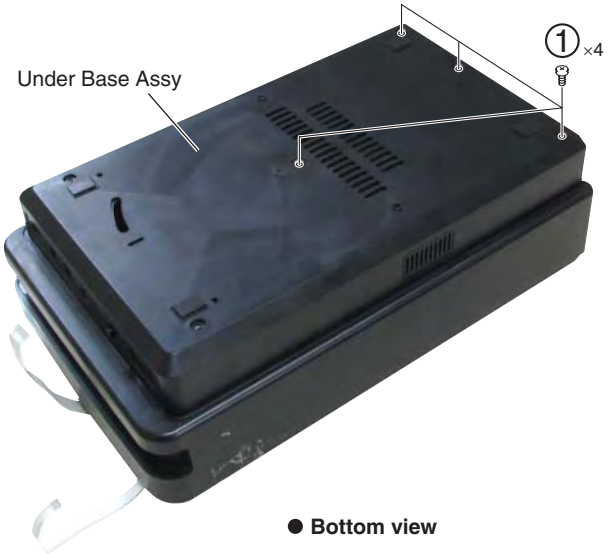


● **Rear view**

③ Disconnect the two flexible cables.

3 Under Base Assy

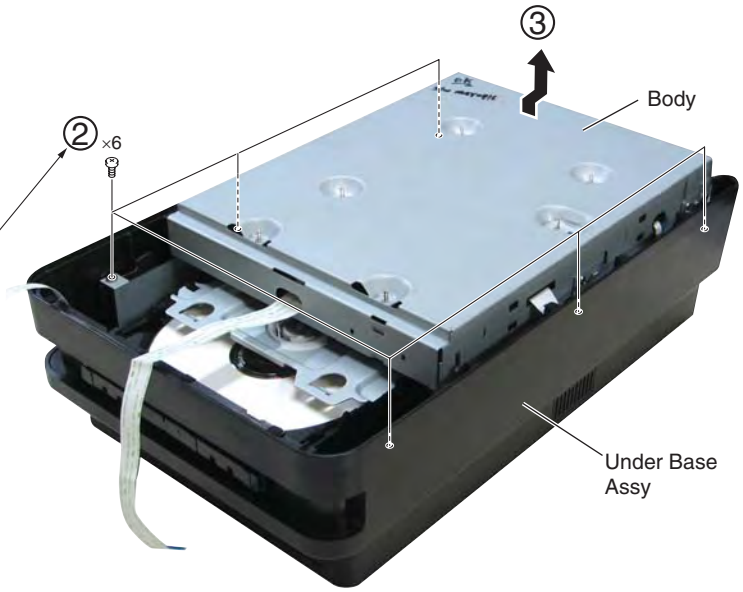
① Remove the four screws.



● **Bottom view**

② Remove the six screws.

③ Lift the back of the body and move it backward to remove it from Under Base Assy.



6 pieces of screw (BBZ30P060FNI)
Caution points:
1. Do not use electric screw driver.
2. Do not apply too much force during manual tightening.

Extra caution points

The 6 screws for the top panel assembly must be manually unscrew and screw (hand tighten will do, do not use electric screw driver and do not apply too much force when tightening, if not there is a possibility that the screw tread on the top panel will be worn out)

4 Top Shield section

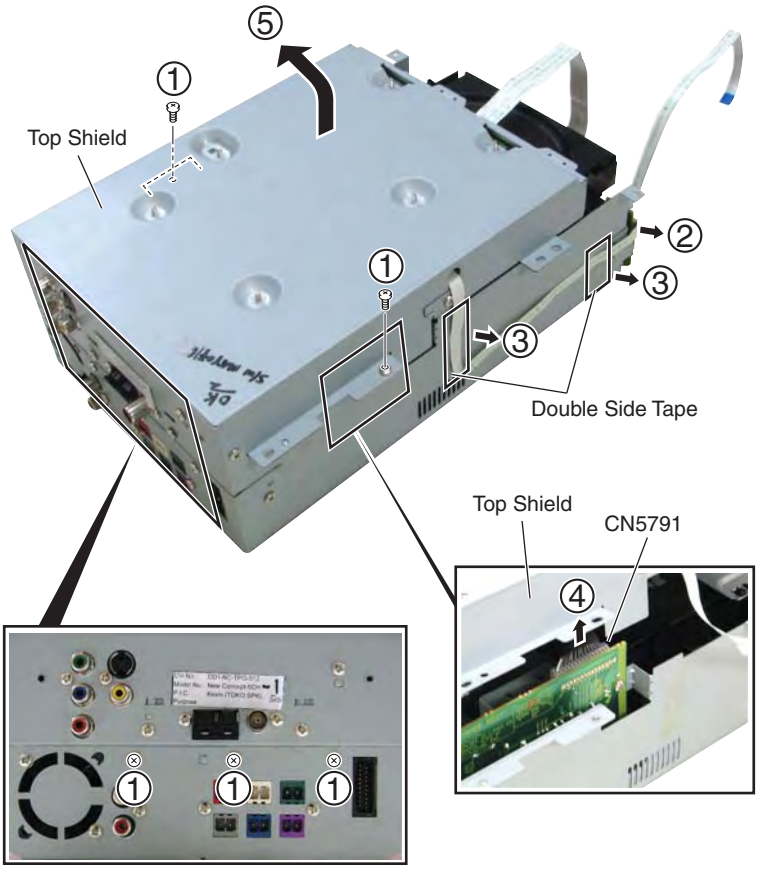
① Remove the five screws.

② Disconnect the one flexible cable.

③ Remove the flexible cable from 2 pieces of Double Side Tape.

④ Lift the left side of Top Shield and remove the connector (CN5791).

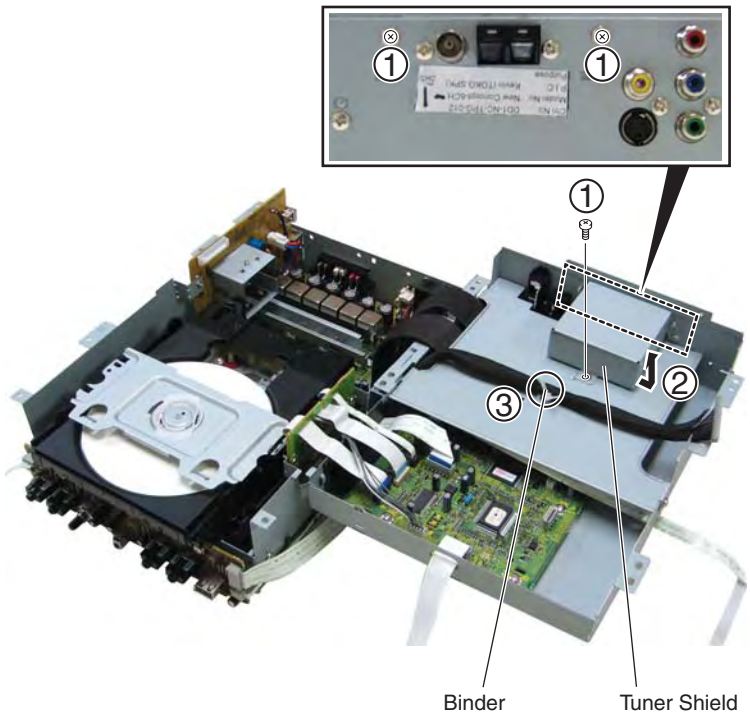
⑤ Open Top Shield to the right.



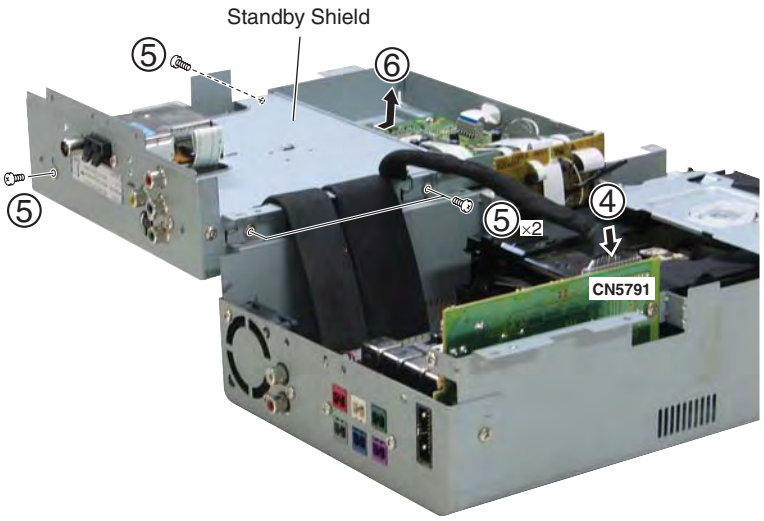
● **Left Side View**

5 Tuner Shield, Standby Shield

① Remove the three screws.
② Move Tuner Shield to the right to remove.
③ Cut a Binder.



④ Insert the connector.
⑤ Remove the four screws.
⑥ Move Standby Shield forward to remove.

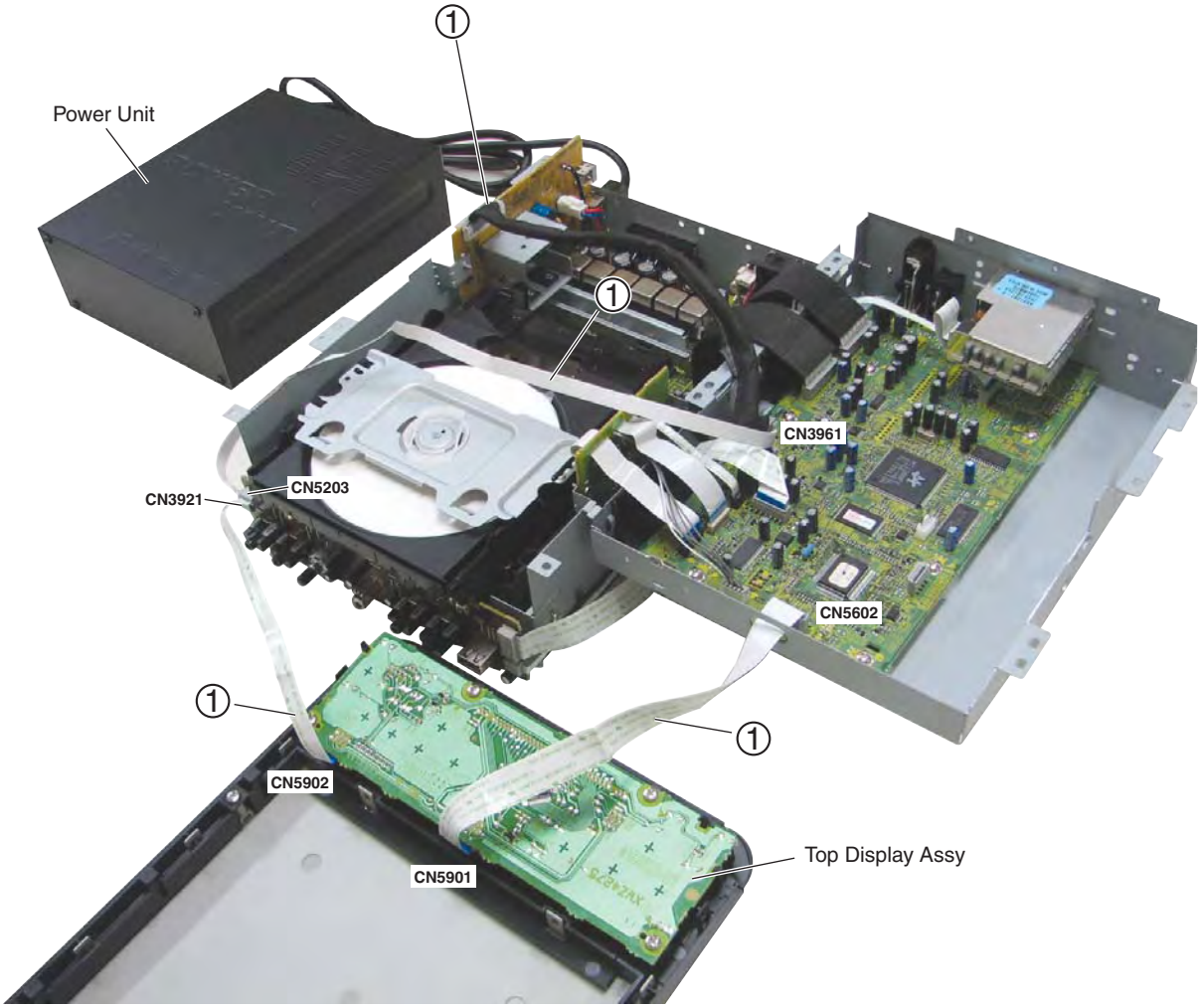


6 Diagnosis

① Connect the three flexible cables and connector.

② Arrange the unit as shown in the photo below.

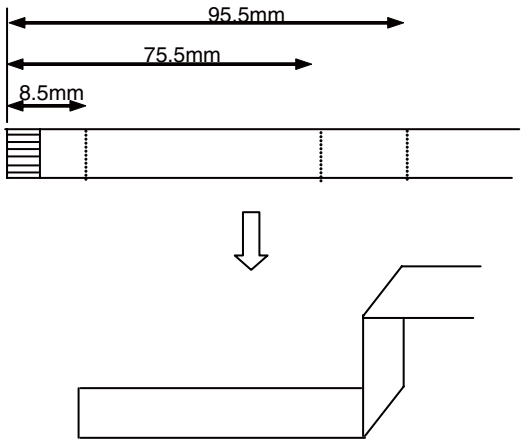
Diagnosis



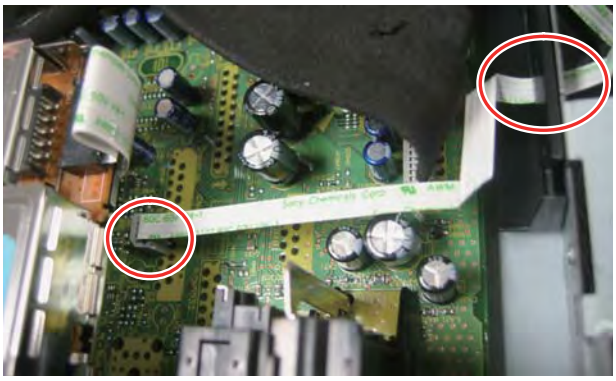
3 pins FFC (XDD3241) from DVD Main Assembly to Mic/Hp Assembly cannot be touched to metal due to EMC reason. The wire styling need to follow the original factory condition.

Arrangement of the FFC cable

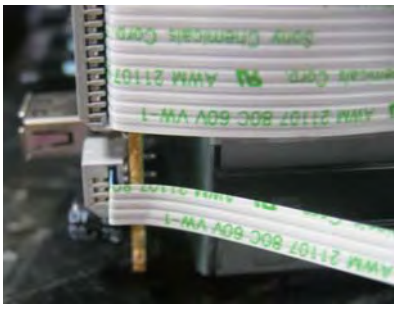
1. Fold the FFC cable for the connector with the backing outward in the illustration below.



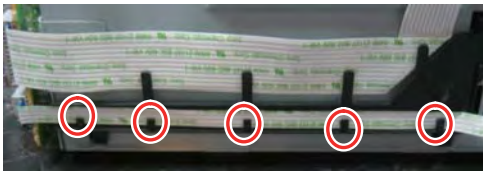
2. Insert the FFC to the connector (DVD Main Assy), and then through the slot of the wire holder B.



3. Insert the FFC to connector (Mic/HP Assy)



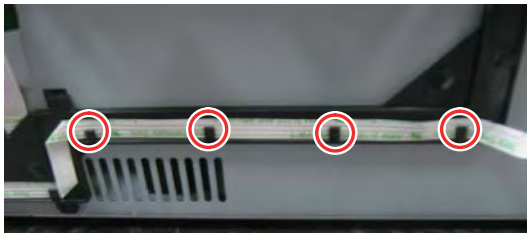
4. Insert the FFC into the 5 slots.



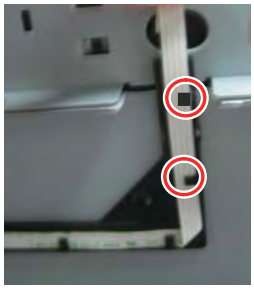
5. Bend the FFC upwards.

6. Bend the FFC to the right.

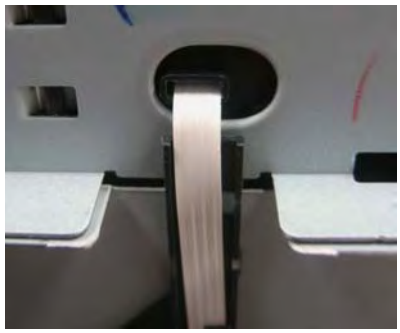
7. Insert the FFC into 4 slots.



8. Bend FFC upwards and insert in the 2 slots.



9. Push back the extra FFC into the slot.



Removing the Traverse Mechanism Assy-S and 06SD Pickup Assy-S

1 06 LOADER Assy

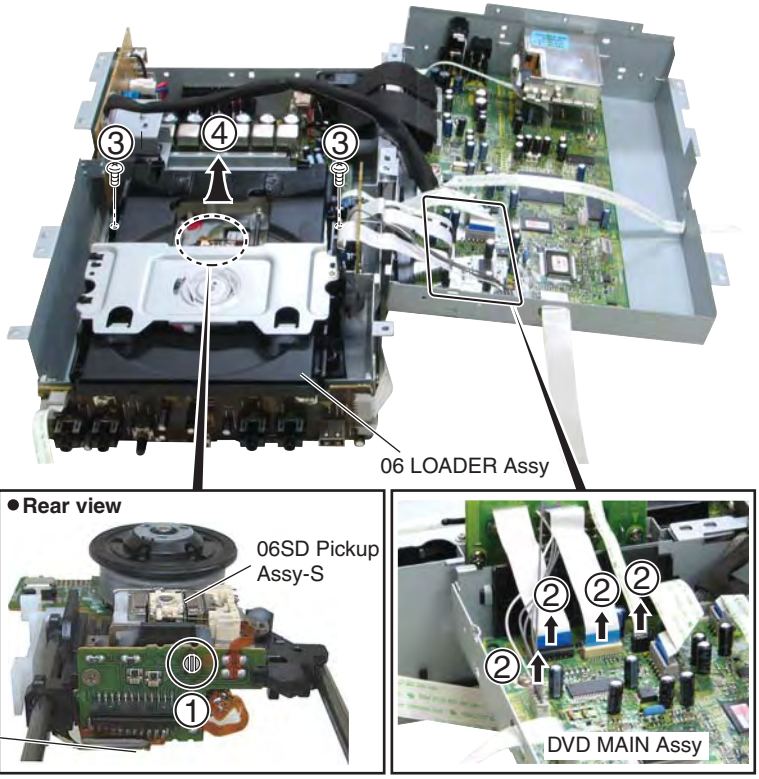
① Short-circuit point by soldering.

Note: After replacement, connect the flexible cable, then remove the soldered joint (open).

② Disconnect the four connectors.

③ Remove the two screws.

④ Remove the 06 LOADER Assy.



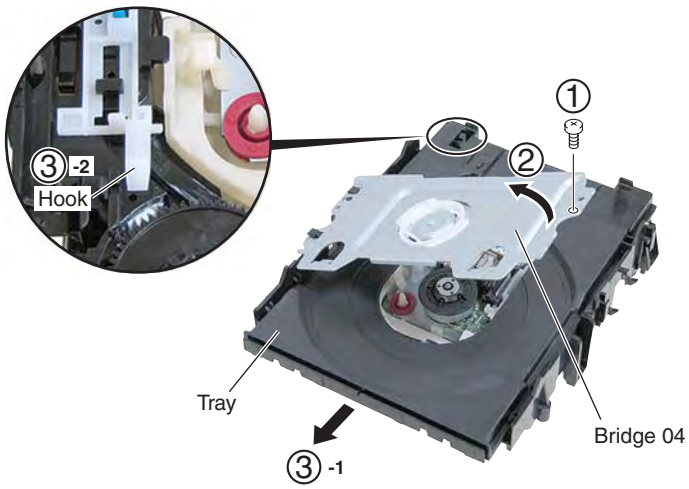
Note: Do not touch the bottom side of the 06SD Pickup Assy-S. If touched, the optical axis may be shifted.

2 Bridge 04, Tray

① Remove the one screw.

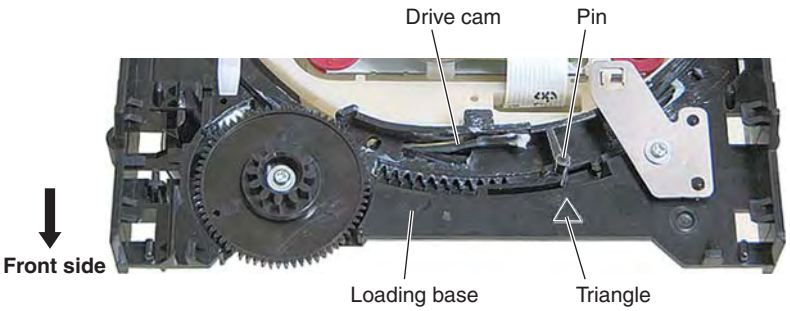
② Remove the bridge 04.

③ Pull out the tray, then remove it by pressing the hook.



Note when reinserting the tray

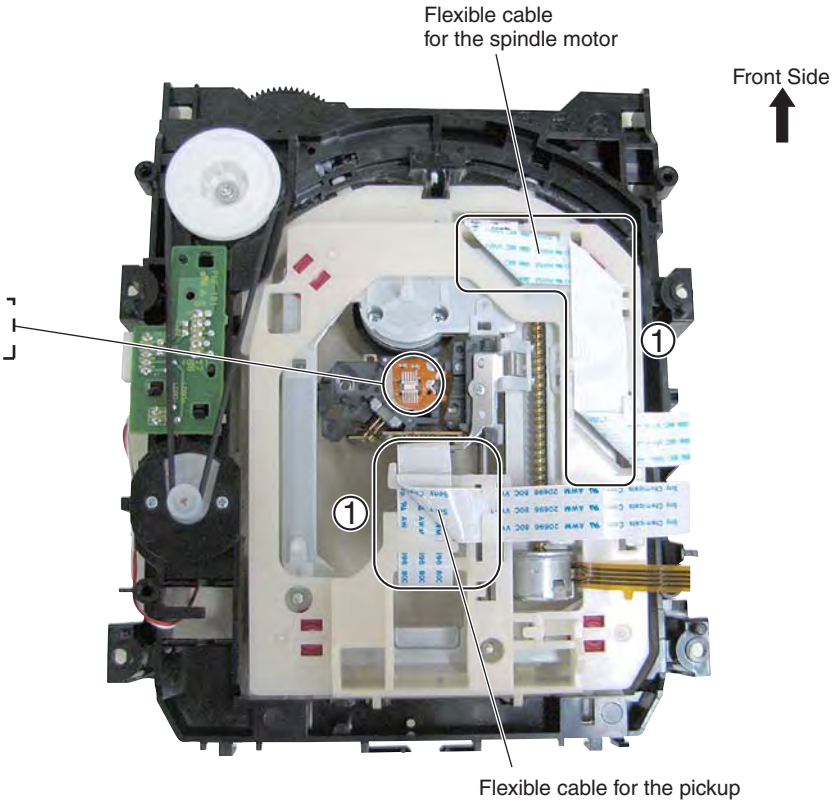
When reinserting the tray, first align the triangle printed on the loading base and the pin of the drive cam, then insert the tray.



3 Traverse Mechanism Assy-S

① Dislodge the two flexible cables from their factory placement.

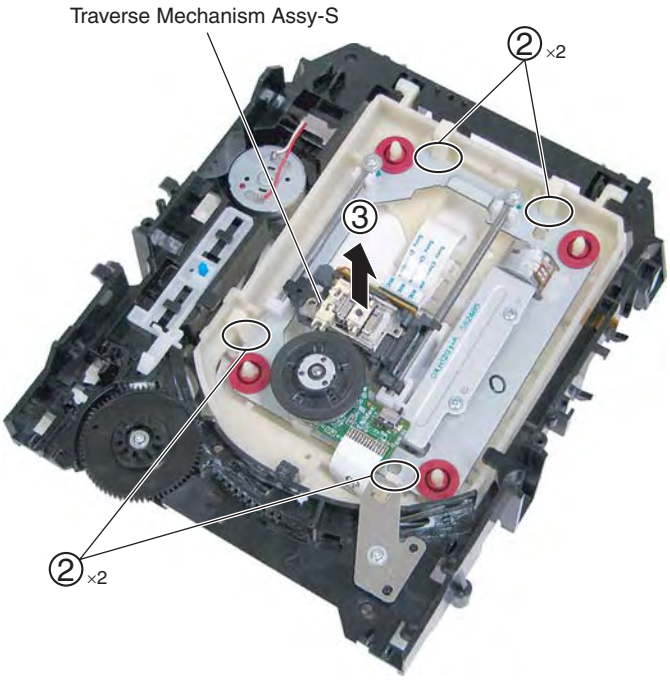
Note: Do not touch the IC for the optical axis. If touched, the optical axis may be shifted.



● **Bottom view**

② Unhook the four hooks.

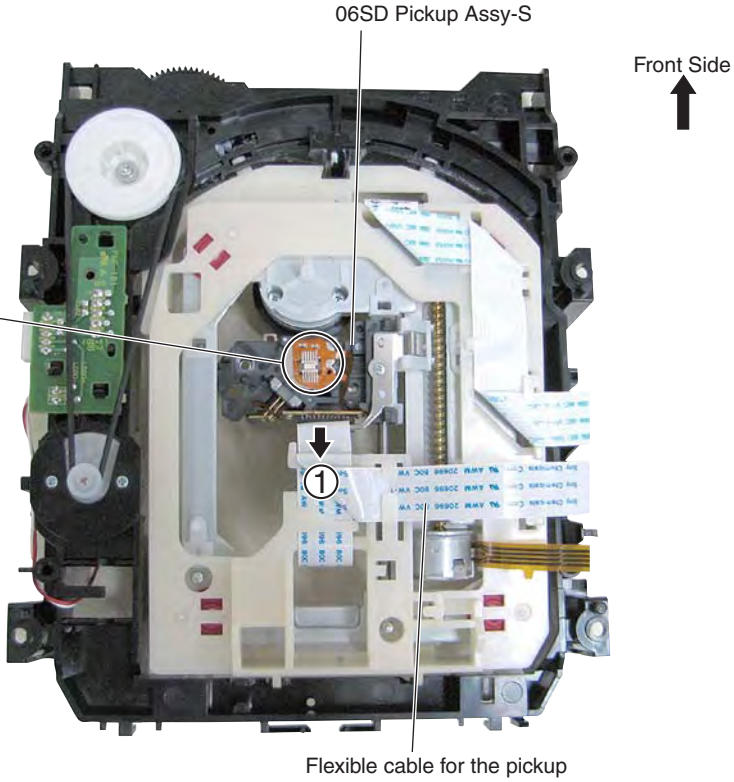
③ Remove the Traverse Mechanism Assy-S.



4 06SD Pickup Assy-S

Note: The 06SD Pickup Assy-S can be removed without removing the Traverse Mechanism Assy-S. (shown as Step 3 .)

① Disconnect the flexible cable for the pickup.

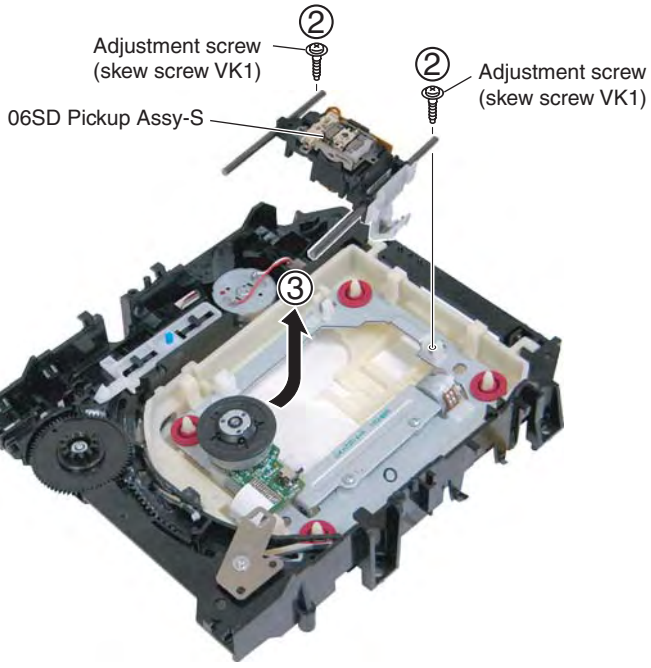


● **Bottom view**

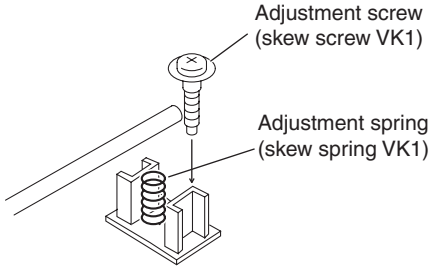
Note: Do not touch the IC for the optical axis. If touched, the optical axis may be shifted.

② Remove the two adjustment screws.

③ Remove the 06SD Pickup Assy-S.

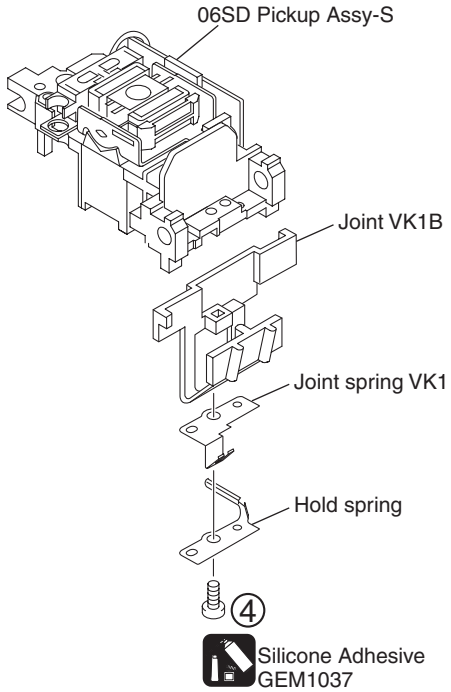


Note: Be careful not to lose the adjustment spring (skew spring VK1).



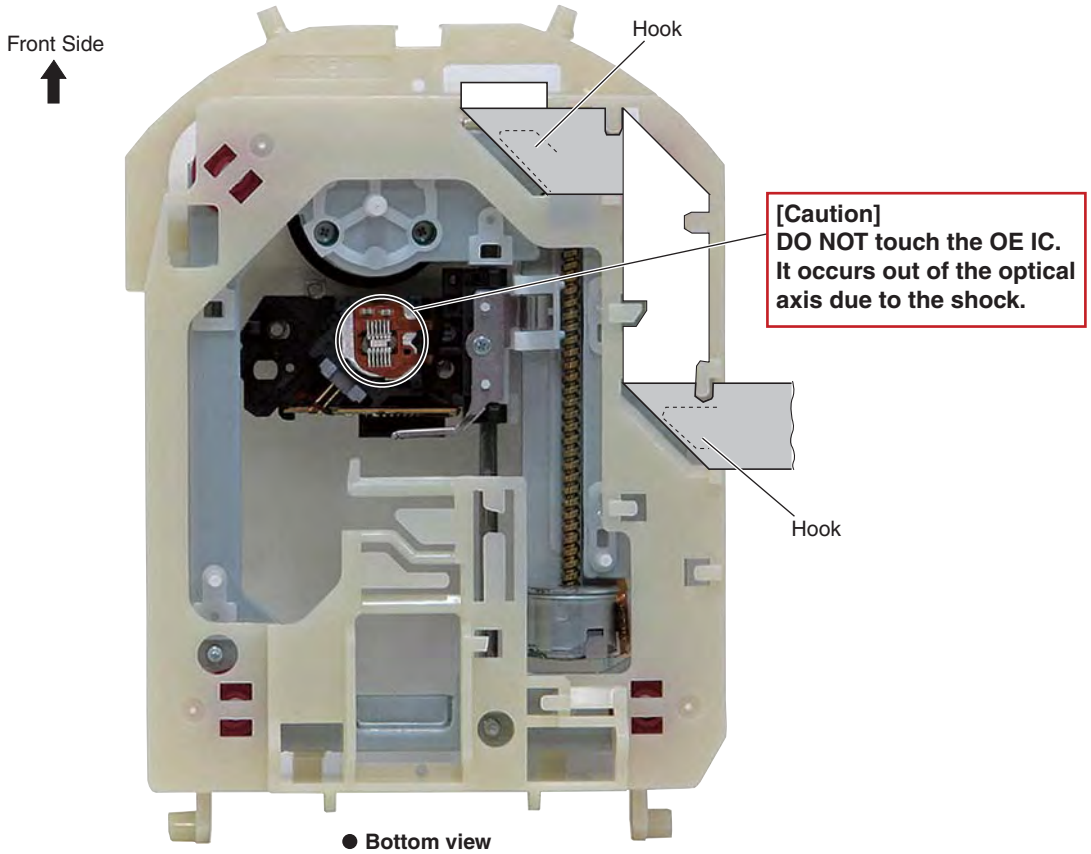
④ Remove the one screw.

Note: The screw is secured with the silicone adhesive.
Make sure to apply the silicone adhesive after reattaching the screw.



Arrangement of the flexible cable for the spindle motor

: Conductive surface

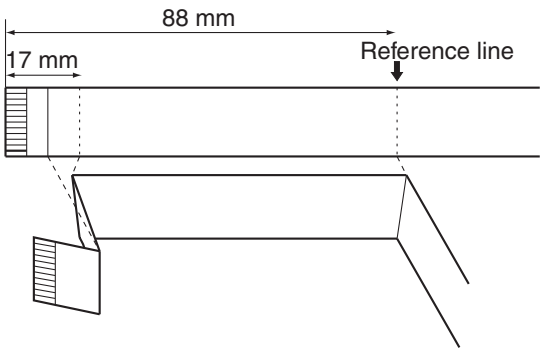


Arrangement of the flexible cable for the pickup

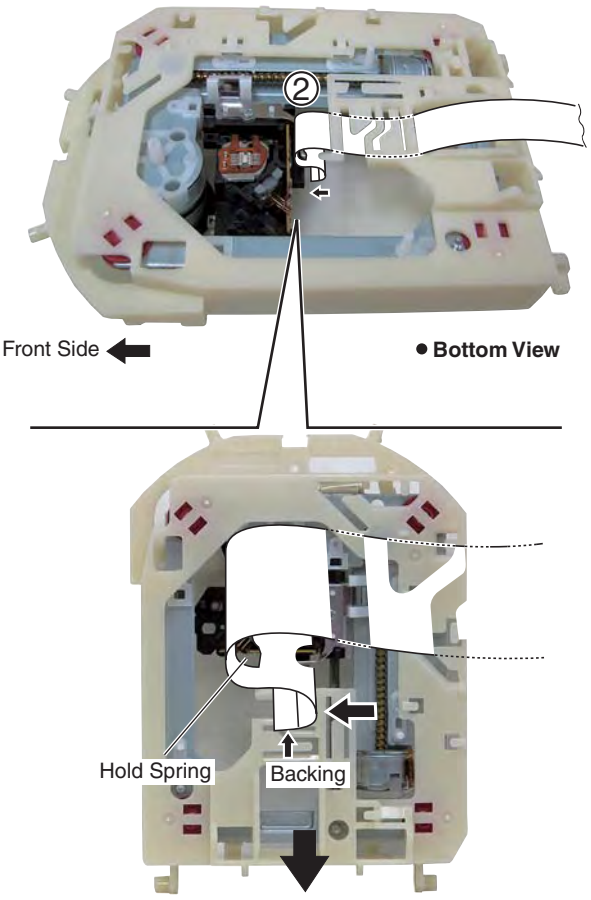
: Conductive surface

Note:
Be sure to move the 06SD Pickup Assy-S to the innermost perimeter.

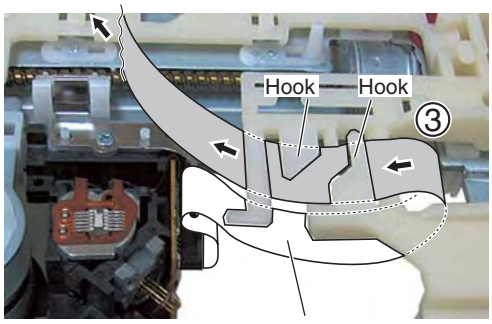
① Fold the flexible cable for the pickup with the backing outward in the illustration below.



② Attach the flexible cable for the pickup to the connector.



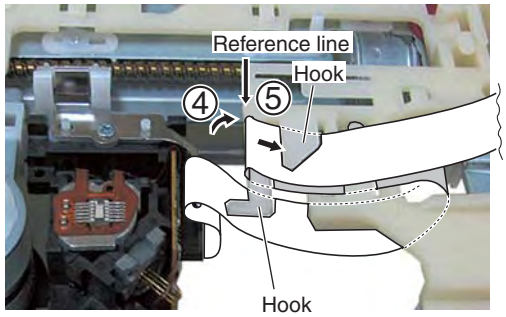
③ Pass the flexible cable through the hook.



Make sure that the cable is loose

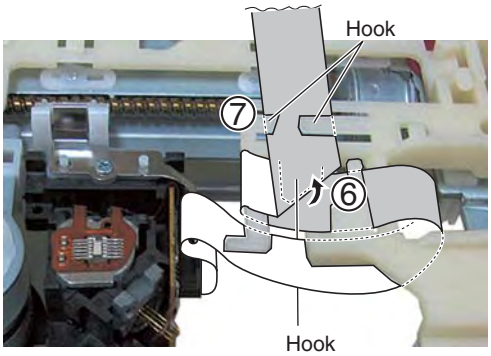
④ Hook the part folded in Step ① to the hook.

⑤ Pass the flexible cable through the hook.



⑥ Fold the flexible cable along the hook.

⑦ Pass the flexible cable through the hook.



8. EACH SETTING AND ADJUSTMENT

8.1 ADJUSTMENT

8.1.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

❶ Tangential and Radial Height Coarse Adjustment

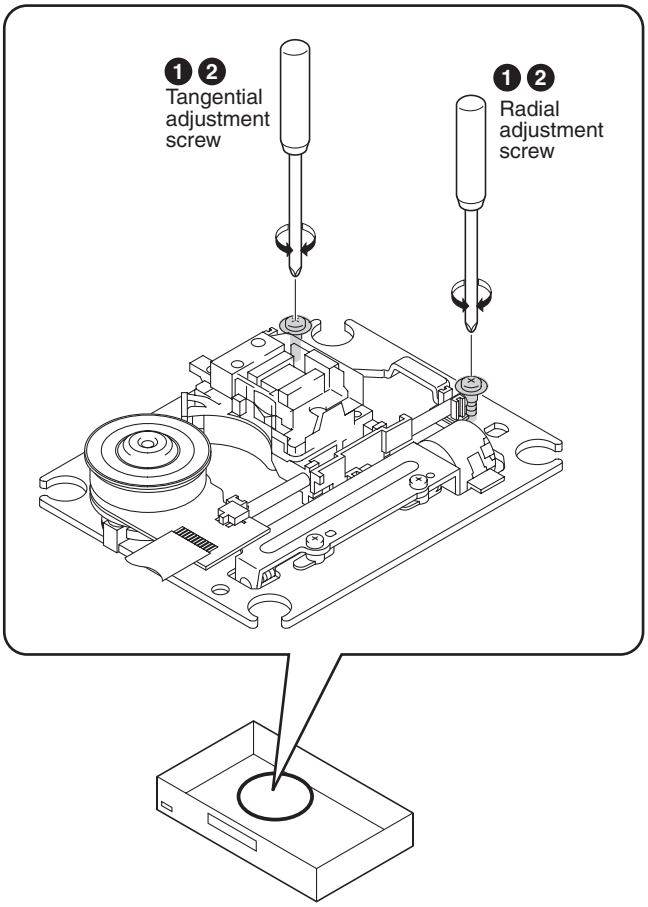
❷ DVD Error Rate Adjustment

[Electrical Part]

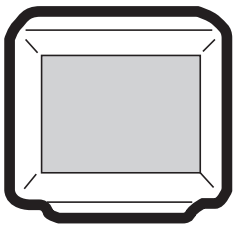
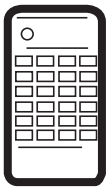
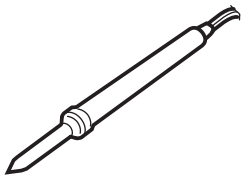
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



8.1.2 JIGS AND MEASURING INSTRUMENTS

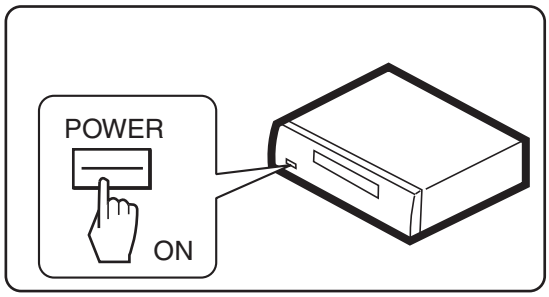
⊕ Screwdriver (large)	⊕ Screwdriver (medium)	 TV monitor	 Test mode remote control unit (GGF1381)
⊕ Precise screwdriver	DVD test disc (GGV1025)	 Soldering iron	Screw tight (GYL1001)

8.1.3 NECESSARY ADJUSTMENT POINTS

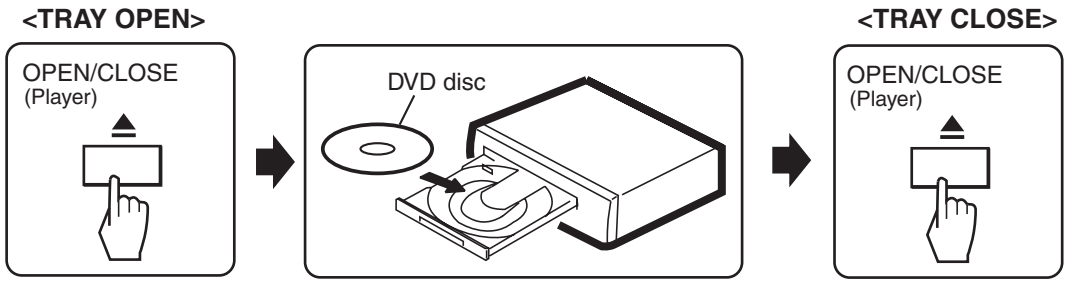
When	Adjustment Points	
■ Exchange Parts of Mechanism		
Exchange the 06SD Pickup Assy-S	Mechanical point	❶,❷ * After adjustment, screw locks with the Screw tight.
	Electric point	———
Exchange the Traverse Mechanism Assy-S	Mechanical point	———
	Electric point	———
Exchange the Spindle Motor	Mechanical point	❷ * After adjustment, screw locks with the Screw tight.
	Electric point	———
■ Exchange PCB Assy		
Exchange PC Board LOAB and DVD MAIN ASSYS	Mechanical point	———
	Electric point	———

8.1.4 TEST MODE

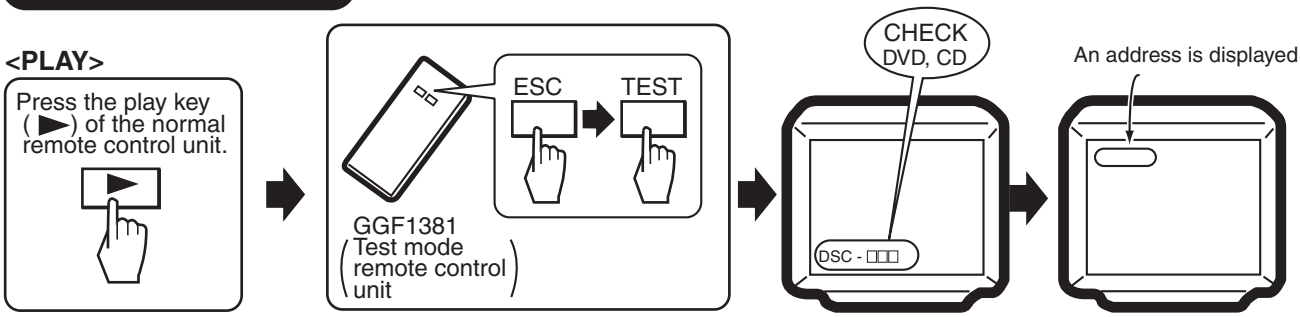
POWER ON



DISC SET

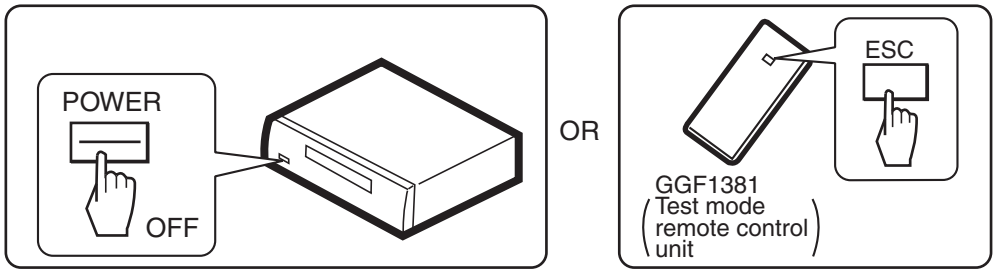


TEST MODE: PLAY



Notes:
- After going into test mode, if you play back the disc, "DISC-NON" is displayed.
- The video signal and the audio signal are outputted duvring the test mode.
- The SKIP key and the SCAN key are effective during the test mode.

TEST MODE: OFF



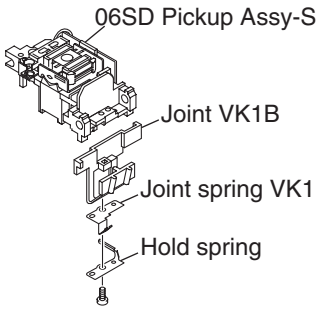
8.1.5 MECHANISM ADJUSTMENT

1 Tangential and Radial Height Coarse Adjustment

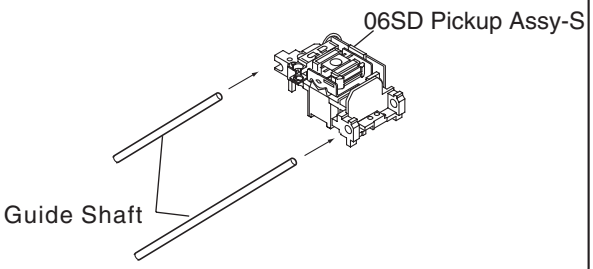
START

- Remove the 06SD Pickup Assy-S from the Traverse Mechanism Assy-S.
- Remove the joint and the joint spring of the 06SD Pickup Assy-S.

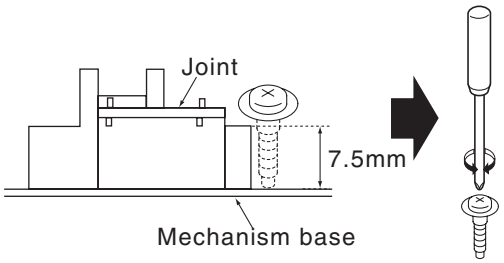
Note:
Before removing the flexible cable for the pickup, soldering of the pickup circuit is necessary.
For details, see “7. DISASSEMBLY”.



- Pass through the guide shaft to a new 06SD Pickup Assy-S.
- Attach it to the Traverse Mechanism Assy-S.



- Put the joint between the Tangential (or Radial) adjustment scrw and the mechanism base and turn each screw to adjust the height.
(Refer to "8.1.1 ADJUSTMENT ITEMS AND LOCATION".)



- Attach the Traverse Mechanism Assy-S to the 06 LOADER Assy.
- Turn it over and attach the joint and the joint spring.
- Arrange the flexible cables.
(Refer to "7. DISASSEMBLY".)

2 DVD Error Rate Adjustment

Notes:
· Use disc: GGV1025

START

· Play the DVD test disc at inner track
· Display ERROR RATE on the monitor

ESC CHP/TIM

Traverse Mechanism Assy-S
Adjust the radial adjustment screw so that ERROR RATE becomes around "5E-4". A

ERROR RATE : "5E-4"

· Play the DVD test disc at inner track (around #30000)

Traverse Mechanism Assy-S
Fasten the radial adjustment screw so that ERROR RATE becomes around "1E-3". B

ERROR RATE : "1E-3"

· Unfasten the radial adjustment screw by 90 degrees step till ERROR RATE becomes around "1E-3" again . C
· Record the number of rotation (N1).
(memorizing how much the screw was rotated.)
· Fasten the radial adjustment screw till the number of rotation becomes harf of N1. Best Radial point

ESC
Service mode end

· Play the DVD test disc at outer track (around #200000)

➡ Service mode
ESC CHP/TIM

Traverse Mechanism Assy-S
Fasten the tangential adjustment screw so that ERROR RATE becomes around "1E-3". B

ERROR RATE : "1E-3"

· Unfasten the tangential screw by 90 degrees step till ERROR RATE becomes around "1E-3" again . C
· Record the number of rotation (N1).
· Fasten the tangential adjustment screw till the number of rotation becomes harf of N1. Best tangential point

ESC
Service mode end

Disc playback normally.
· The measurement of block error rate

ESC CHP/TIM

CHECK

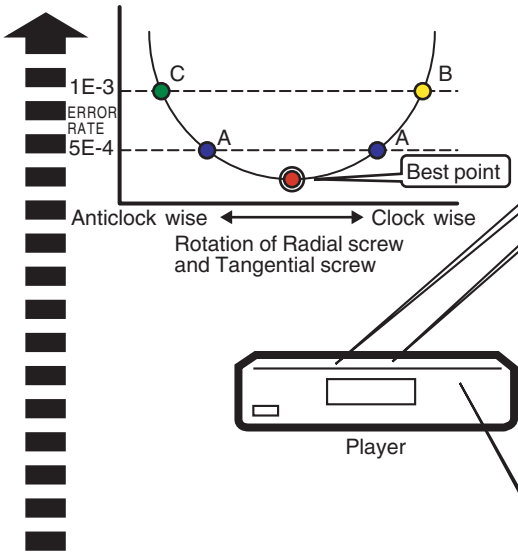
In this check, the error rate that is less than "5E-5"is better.

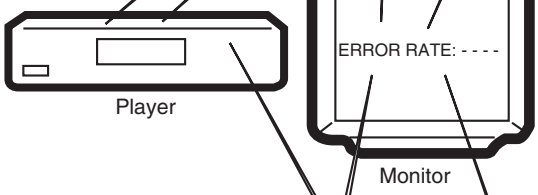
NG

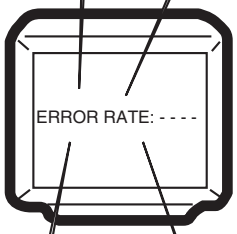
OK

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight.
Screw tight: GYL1001

Turn the POWER OFF in case of NG once, and perform the adjustment once again.







8.2 ID NUMBER AND ID DATA SETTING

Caution:
For the DVD players compatible with DVD-RW, for playback of a DVD-RW disc (CPRM) and for the DVD players possessing HDMI output, for HDCP process, it is necessary that an individual ID number and ID data are set for each player. If the ID number and ID data be not properly set in the manner described below, future operations cannot be guaranteed. The ID number is written on the yellow label at the rear panel of the player.
If there is no yellow label, before downloading FLASH ROM, take note of the ID number set following the procedures outlined in "ID Number Confirmation Mode" on the next page.
Note: Enter ID numbers while the unit is in Stop mode so that the values set will be immediately written to the flash ROM.

Setting an ID number or ID data is required in the following case:
If "No NUM" or "NO DATA" is displayed on the FL display for a few seconds immediately after the power to the player is turned on or during Stop mode.

JIGS AND MEASURING INSTRUMENTS

Service Remote Control Unit [GGF1381]	DVD Data Disc [GGV1309]

ID Number Input Mode

① To enter ID Number Input Mode, with no ID number set, such as in a case of immediately after upgrading the firmware, press the ESC key then the STEREO key.

Note: If a previous ID number and ID data, such as a factory-preset ID number and ID data, are maintained, the unit enters ID Number Confirmation Mode when the above keys are pressed. However, if only an ID number is maintained, the unit enters ID Data Input Mode.

② Enter a 9-digit ID number. The ID number is also displayed on the FL display.

③ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.

```
[Player's ID Number Setting]
 ID Number ?
② - - - - - - - - -
③ <CLEAR>  Exit

 Input ID Number !
```

④ After entering all 9 digits, if you press the PLAY key, the unit enters Compare mode. Enter the same ID number again. Only if your two input numbers match, the ID number is set. Compare mode helps eliminate mistyping of the ID number.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ② without doing anything else.

⑤ After entering all 9 digits, if you press the SEARCH key, the unit unconditionally sets the input number as the ID number. Then the unit automatically enters Player's Data Input Mode. (The SEARCH key is not accepted after all 9 digits have been entered.)

```
[Player's ID Number Setting]
 ID Number ?
  0 0 0 0 0 0 0 0 1

④ <PLAY>      Compare Mode
⑤ <SEARCH>  Enter

 Input ID Number !
```

⑥ This display appears when the PLAY key is pressed in Step 4. Enter a 9-digit number to compare. The number is also displayed on the FL display.

⑦ By pressing the CLEAR key without having input a number, the unit returns to Step ② without doing anything else. Each press of this key after a number has been input deletes one digit.

```
[Player's ID Number Setting]
 ID Number ?
    0 0 0 0 0 0 0 0 1
 Compare
⑥   * * * * * * * * *


 Input ID Number !
```

⑧ After entering all 9 digits, if you press the PLAY key, the unit compares the numbers input in Steps ② and ⑥, and only if the numbers match, that number is set as the ID. Then the unit automatically enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Input Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ⑥ without doing anything else.

```
[Player's ID Number Setting]
 ID Number ?
    0 0 0 0 0 0 0 0 1
 Compare
    0 0 0 0 0 0 0 0 1

⑧ <PLAY>  Enter

 Input ID Number !
```

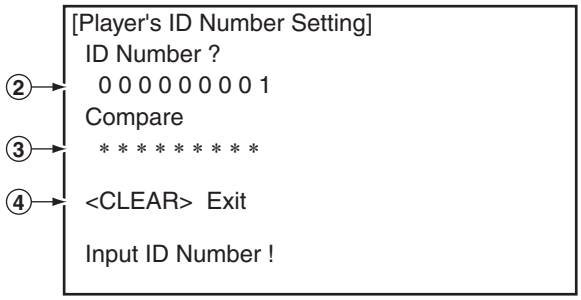
ID Number Confirmation Mode

① To enter ID Number Confirmation Mode after the ID number and the ID data are set, press the ESC key then the STEREO key.

② The ID number already set is displayed.
(It is also displayed on the FL display.)

③ Enter a 9-digit number for comparison. This is not required when you only wish to check the ID number visually.
(The number is also displayed on the FL display.)

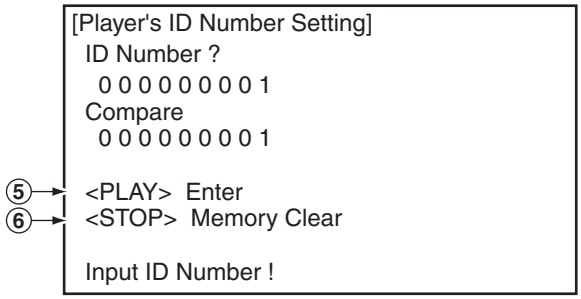
④ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.



⑤ After entering all 9 digits, if you press the PLAY key, the unit compares the number entered in Step ② with the ID number set, and only if the numbers match, the unit automatically exits ID Number Confirmation Mode. If an ID data has not been entered, the unit enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Confirmation Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ④ without doing anything else.

⑥ After entering all 9 digits, if you press the STOP key, the unit compares the number entered in Step ③ with the ID number set, and only if the numbers match, the unit automatically deletes the ID number and exits this mode. If the numbers do not match, the disc tray is opened, and the unit exits this mode. (The STOP key is not accepted after all 9 digits have been entered.)



• Indication of an ID number already set

An ID number already set is displayed in the following cases:

1) When the ESC key then the CLEAR key are pressed, user settings are cleared, then the ID number set is displayed on the screen. In this case, the ID number is not displayed on the FL display.
2) When the unit enters ID Number Confirmation Mode by your pressing the ESC key then the CLEAR key, the ID number set is displayed. In this case, the ID number is also displayed on the FL display.
If you only need to confirm the ID number, you can exit this mode by pressing the CLEAR key or turning off the power.

• Indication when no ID number is set

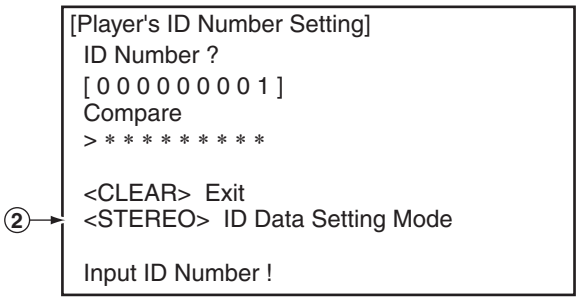
If no ID number is set, the message "No NUM" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

ID DATA Input Mode

NOTE: Be sure to use a specified DVD (ID) DATA DISC.

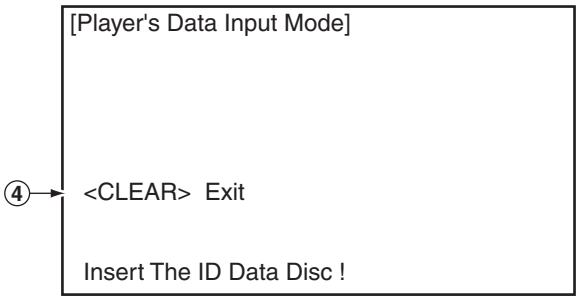
① To enter ID DATA Input Mode, with the ID number set, press the ESC key then the STEREO key.

② When the STEREO key is pressed, the unit enters ID DATA Input Mode.



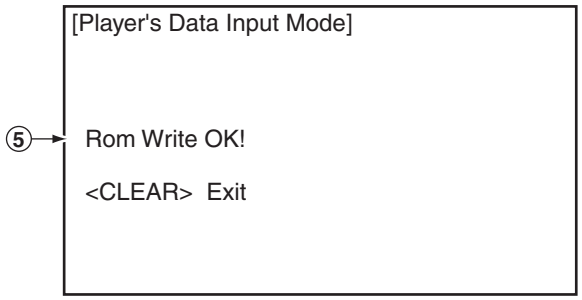
③ If the DVD DATA DISC is loaded in this mode, the unit automatically starts reading the data.
(If the DVD DATA DISC has already been loaded, the unit does not start reading the data. In this case, open then close the tray.)

④ To exit this mode, press the CLEAR key. While data are being read from the DVD DATA DISC, you cannot exit this mode.



⑤ When writing of the data read from the disc to flash ROM is completed, "Rom Write OK!" is displayed. After seeing this message, you can exit this mode by pressing the CLEAR key.

Note: Whether or not the data have been written to flash ROM can be confirmed by watching for the message "Rom Write OK!" being displayed after the disc is read.



⑥ If the data cannot be read from the disc, the unit will be exited ID Data Input Mode and proceed to the display of "**Pioneer**" logo.

• Indication when the data have not been set

If no ID data are set after the ID number is changed, the message "NO DATA" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

A

B

C

D

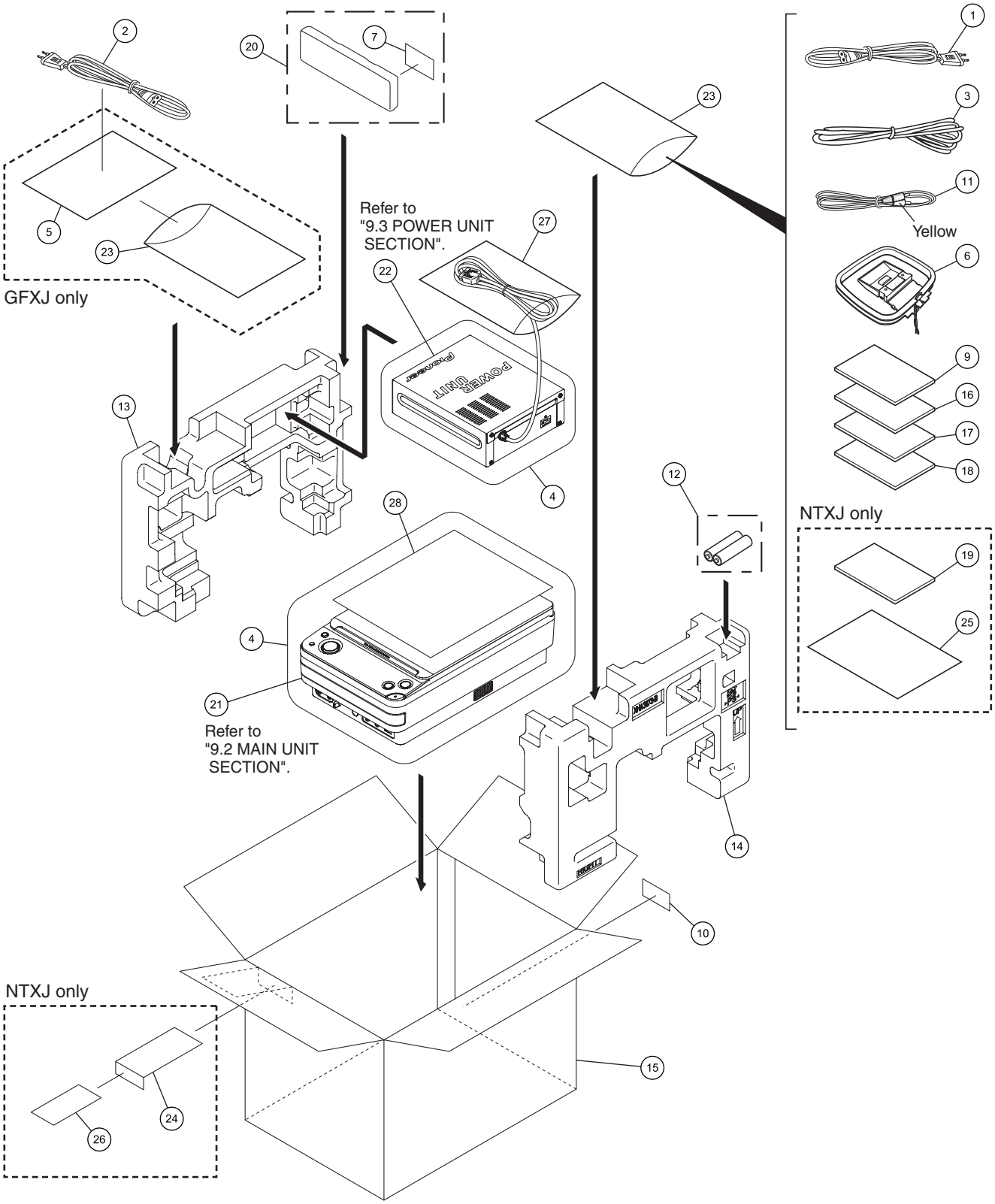
E

F

9. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

9.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

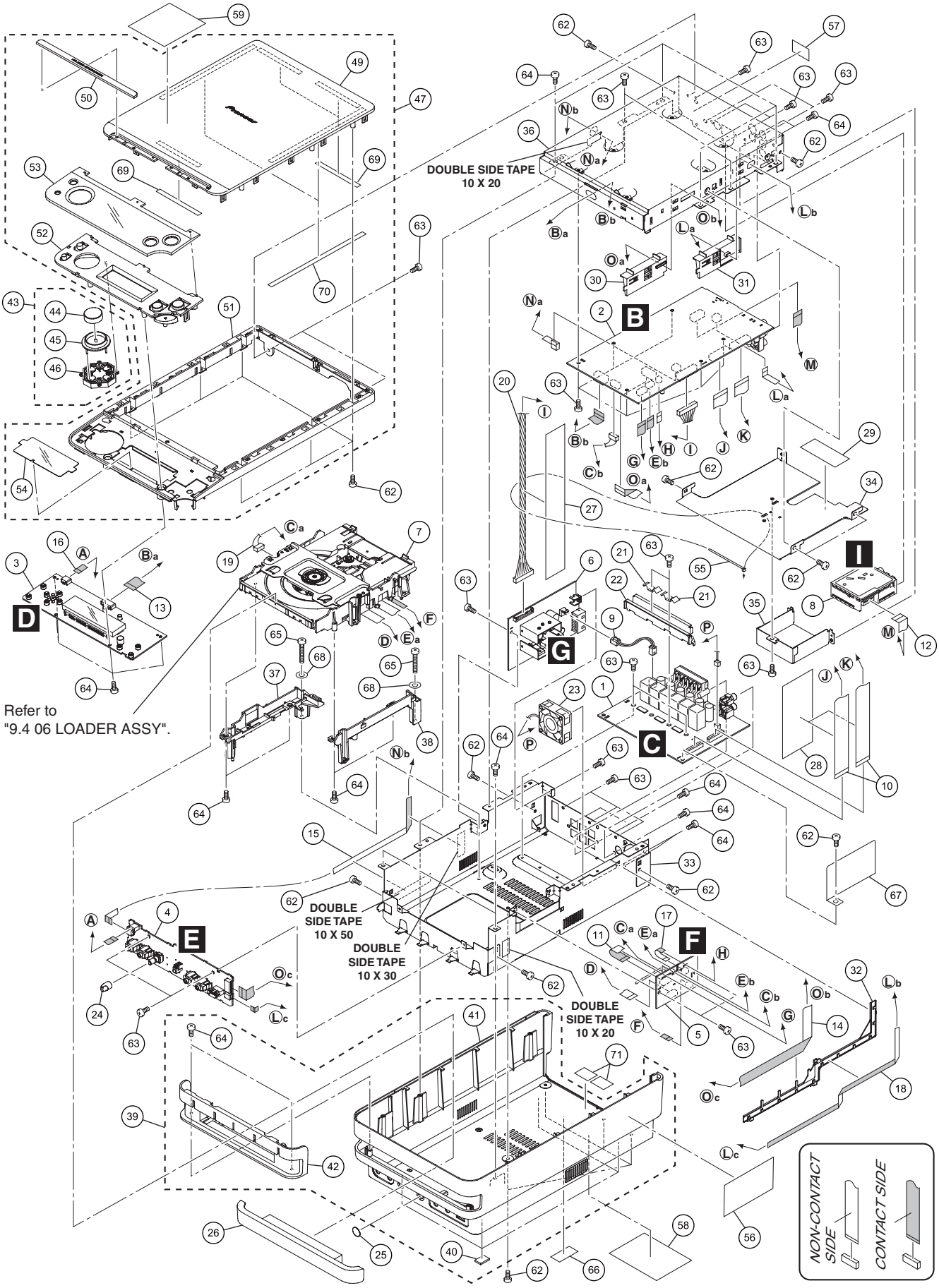
Mark	No.	Description	Part No.
⚠	1	AC Power Cord	See Contrast table (2)
⚠	2	AC Power Cord	See Contrast table (2)
	3	FM Antenna	ADH7030
	4	Packing Sheet	AHG7053
	5	Caution Card SB	See Contrast table (2)
	6	AM Loop Antenna	ATB7013
	7	Battery Cover	AZN8018
	8	• • • • •	
	9	Operating Instructions (Arabic)	See Contrast table (2)
NSP	10	Serial Label	VRW1629
	11	Video Cord	XDE3046
NSP	12	Dry Cell Battery (AA/R6)	XEX3002
	13	Pad L	XHA3172
	14	Pad R	XHA3173
	15	Packing Case	See Contrast table (2)
	16	Operating Instructions (English)	See Contrast table (2)
	17	Operating Instructions (Chinese)	See Contrast table (2)
	18	Operating Instructions (Spanish)	See Contrast table (2)
	19	Operating Instructions (Thai)	See Contrast table (2)
	20	Remote Control Unit	XXD3144
NSP	21	Main Unit Assy	See Contrast table (2)
NSP	22	Power Unit Assy	See Contrast table (2)
NSP	23	Polyethylene Bag	Z21-038
NSP	24	Vinyl Bag	See Contrast table (2)
NSP	25	Service Map (Thai)	See Contrast table (2)
NSP	26	Warranty Card (Thai)	See Contrast table (2)
NSP	27	Plastic Bag (Original)	• • • • •
	28	Protection Sheet	XEC3083

(2) CONTRAST TABLE

XV-CX505/GFXJ, /NAXJ5, /NTXJ, /TDXJ/RB, /WLXJ and GXJ/RDDF are constructed the same except for the following:

Mark	No.	Symbol and Description	XV-CX505/ GFXJ	XV-CX505/ NAXJ5	XV-CX505/ NTXJ	XV-CX505/ TDXJ/RB	XV-CX505/ WLXJ	XV-CX505/ GXJ/RDDF
⚠	1	AC Power Cord	ADG1154	ADG7079	ADG1154	ADG1154	ADG1154	ADG1154 XDG3033
⚠	2	AC Power Cord	ADG7097	Not used	Not used	Not used	Not used	Not Used
	5	Caution Card SB	ARM7064	Not used	Not used	Not used	Not used	Not used
	9	Operating Instructions (Arabic)	Not used	Not used	Not used	XRC3306	Not used	Not used
	15	Packing Case	XHD3741	XHD3738	XHD3742	XHD3740	XHD3736	XHD3739
	16	Operating Instructions (English)	XRB3083	Not used	Not used	XRB3084	XRB3083	XRB3083
	17	Operating Instructions (Trad Chinese)	XRC3303	Not used	Not used	Not used	XRC3303	Not used
	17	Operating Instructions (Simp Chinese)	Not used	XRC3304	Not used	Not used	Not used	Not used
	18	Operating Instructions (Spanish)	Not used	Not used	Not used	Not used	Not used	XRC3305
	19	Operating Instructions (Thai)	Not used	Not used	XRC3307	Not used	Not used	Not used
NSP	21	Main Unit Assy	XXX3031	XXX3033	XXX3032	XXX3030	XXX3028	XXX3029
NSP	22	Power Unit Assy	XXX3041	XXX3043	XXX3042	XXX3040	XXX3038	XXX3039
NSP	24	Vinyl Bag	Not used	Not used	AHG7031	Not used	Not used	Not used
NSP	25	Service Map (Thai)	Not used	Not used	XRY3005	Not used	Not used	Not used
NSP	26	Warranty Card (Thai)	Not used	Not used	XRY3004	Not used	Not used	Not used

9.2 MAIN UNIT SECTION



(1) MAIN UNIT SECTION PARTS LIST

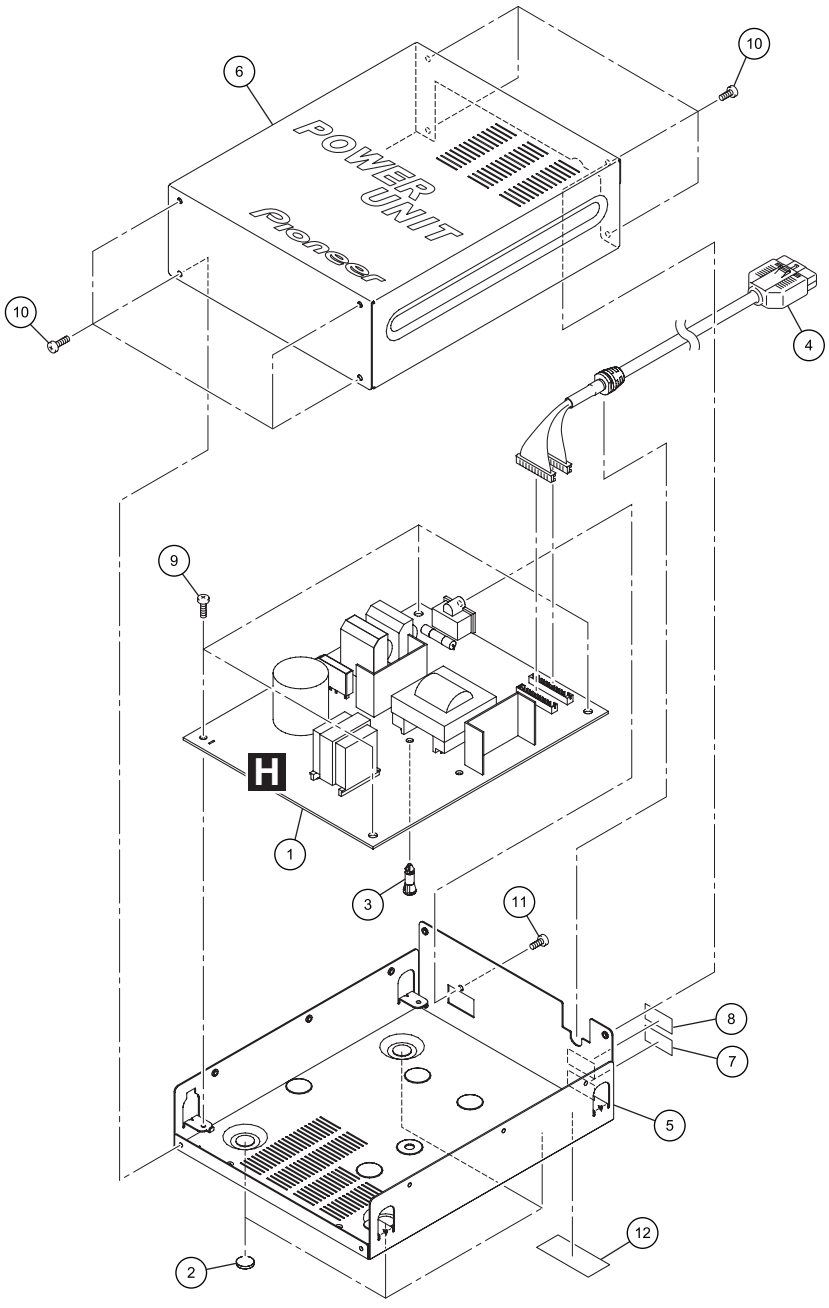
Mark	No.	Description	Part No.
	1	HAMP Assy 6CH	XWK3327
	2	DVDMAIN Assy 6CH	See Contrast table (2)
	3	DISPLAY Assy	XWZ4275
	4	HP/MIC Assy	XWZ4276
	5	DVD TRADE Assy	XWZ4277
	6	REGULATOR TRADE Assy	XWZ4278
NSP	7	06 LOADER Assy	VWT1242
	8	FM/AM Tuner Unit	AXX7251
	9	2P Housing Wire Assy	ADX7480
	10	19P FFC	XDD3243
	11	12P FFC	XDD3244
	12	11P FFC	XDD3237
	13	11P FFC	XDD3238
	14	11P FFC	XDD3240
	15	5P FFC	XDD3239
	16	5P FFC	XDD3242
	17	4P FFC	XDD3245
	18	3P FFC	XDD3241
	19	Cable Assy	XDX3059
	20	Cable Assy	XDX3060
	21	Spring Plate NHTS	ABH7244
	22	Heat Sink NHTS	ANH7190
	23	DC Fan Motor	VXM1121
	24	MIC Knob	XAA3029
	25	Sensor Cover	XAK3585
	26	Tray Cap	XAK3588
	27	Cable Cushion	XEB3094
	28	FFC Cushion	XEB3095
	29	Shield Cushion	XEB3096
	30	Wire Holder A	XMR3112
	31	Wire Holder B	XMR3116
	32	Wire Holder C	XMR3117
NSP	33	Chassis	See Contrast table (2)
NSP	34	Standby Shield	XNG3161
NSP	35	Tuner Shield	XNG3162
NSP	36	Top Shield	See Contrast table (2)
	37	Adaptor05 L	XNW3014
	38	Adaptor05 R	XNW3015
NSP	39	Under Base Assy	XXG3318
	40	Rubber Cushion	XEB3054
	41	Under Base	XMB3284
	42	Mecha Holder	XMR3115
	43	Function Button Assy	XXG3319
NSP	44	Button Cap	XAK3586
NSP	45	LT Conductor	XAK3587
NSP	46	Button Hinge	XMR3114
NSP	47	Top Display Assy	XXG3322
	48	• • • • •	
NSP	49	Top Panel	XAK3579
NSP	50	Name Plate	XAK3583
	51	Sub Panel	XAK3580
	52	Button Panel	XAK3581
	53	Display Panel	XAK3582
	54	FL Filter	XAK3599
NSP	55	Binder (BK-1)	ZCA-BK1
	56	Caution Label	See Contrast table (2)
NSP	57	ID Label Assy	VXW1002
NSP	58	Name Label	See Contrast table (2)
NSP	59	Getter Label	See Contrast table (2)
	60	• • • • •	
	61	• • • • •	
	62	Screw	BBZ30P060FNI
	63	Screw	BBZ30P080FNI
	64	Screw	BPZ30P080FNI
	65	Screw	XBA3018
	66	Serial Label	VRW1629
	67	FFC Barrier	XEC3084
	68	Washer	WA32F080N100
NSP	69	Top Panel Cushion A	XEB3106
NSP	70	Top Panel Cushion B	XEB3107
	71	Connector Cushion	XEB3064

(2) CONTRAST TABLE

XV-CX505/GFXJ, /NAXJ5, /NTXJ, /TDXJ/RB, /WLXJ and GXJ/RDDF are constructed the same except for the following:

Mark	No.	Symbol and Description	XV-CX505/ GFXJ	XV-CX505/ NAXJ5	XV-CX505/ NTXJ	XV-CX505/ TDXJ/RB	XV-CX505/ WLXJ	XV-CX505/ GXJ/RDDF
	2	DVDMAIN Assy 6ch	XWM3386	XWM3381	XWM3380	XWM3379	XWM3378	XWM3378
NSP	33	Chassis	XNA3037	XNA3039	XNA3032	XNA3032	XNA3032	XNA3032
NSP	36	Top Shield	XNG3160	XNG3168	XNG3160	XNG3165	XNG3160	XNG3164
	56	Caution Label	VRW2159	Not used	VRW2257	VRW2257	VRW2257	VRW2257
	56	Ram Caution Label	Not used	VRW1904	Not used	Not used	Not used	Not used
NSP	58	Name Label	XAL3267	XAL3270	XAL3266	XAL3266	XAL3266	XAL3266
NSP	59	Getter Label	XAX3653	XAX3650	XAX3653	XAX3653	XAX3653	XAX3653

9.3 POWER UNIT SECTION



(1) POWER UNIT SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	Power Supply Unit	XWR3015
	2	Leg	AEB7090
	3	Locking Card Spacer	AEC7372
	4	20P Cable	XDE7028
	5	Box Base	See Contrast table (2)
NSP	6	Box Cover	XNE3070
NSP	7	CCC S Label	See Contrast table (2)
NSP	8	SISIR Label	See Contrast table (2)
	9	Screw	BBZ30P080FNI
	10	Screw	BBZ30P080FTB
	11	Screw	PPZ30P080FNI
	12	Serial Label	VRW1629

(2) CONTRAST TABLE

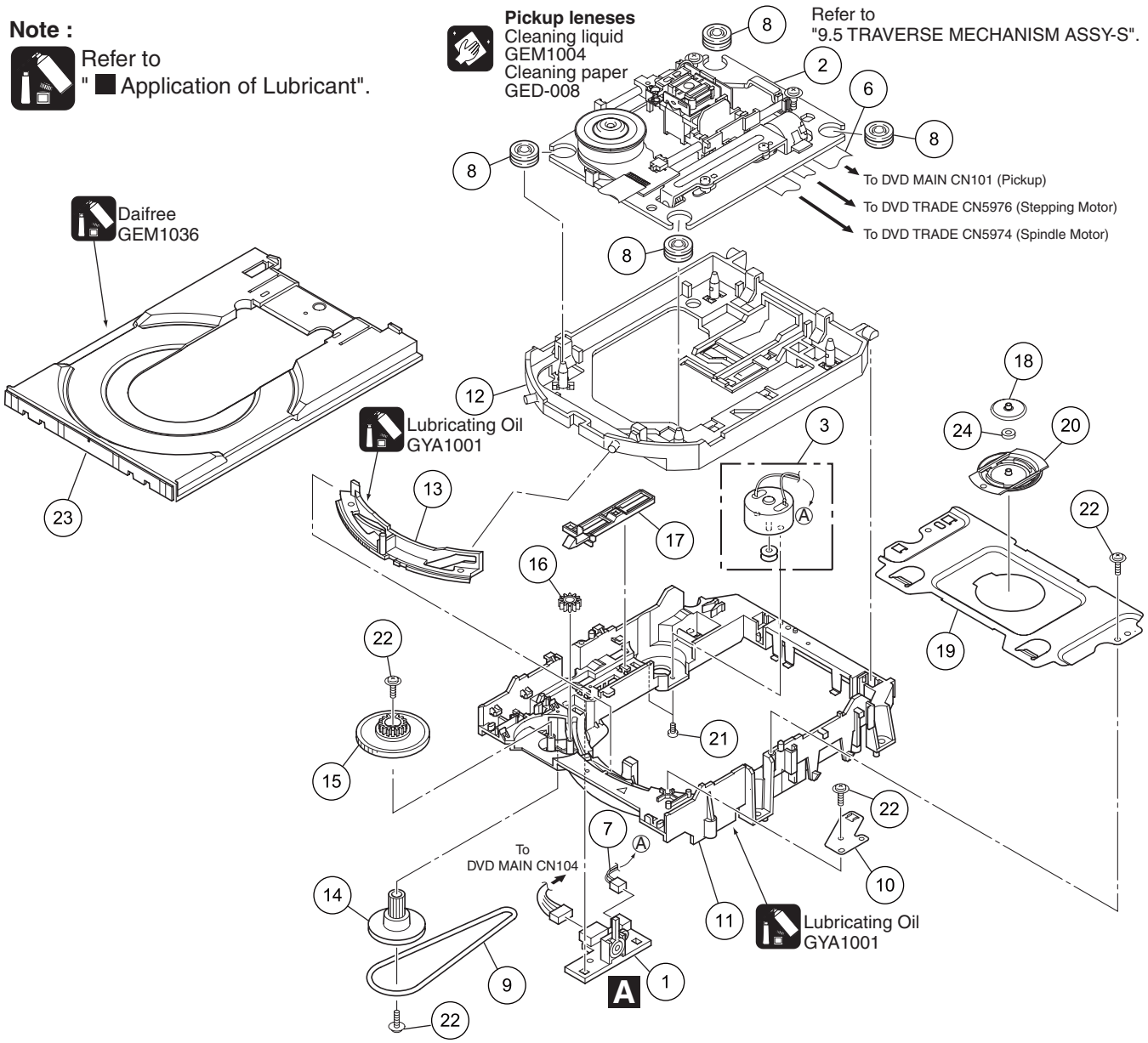
XV-CX505/GFXJ, /NAXJ5, /NTXJ, /TDXJ/RB, /WLXJ and GXJ/RDDF are constructed the same except for the following:

Mark	No.	Symbol and Description	XV-CX505/GFXJ	XV-CX505/ NAXJ5	XV-CX505/ NTXJ	XV-CX505/ TDXJ/RB	XV-CX505/ WLXJ	XV-CX505/ GXJ/RDDF
	5	Box Base	XNA3049	XNA3051	XNA3050	XNA3048	XNA3033	XNA3047
NSP	7	CCC S Label	Not used	DRW2310	Not used	Not used	Not used	Not used
NSP	8	SISIR Label	Not used	Not used	Not used	Not used	XAX3636	Not used

9.4 06 LOADER ASSY

Note :

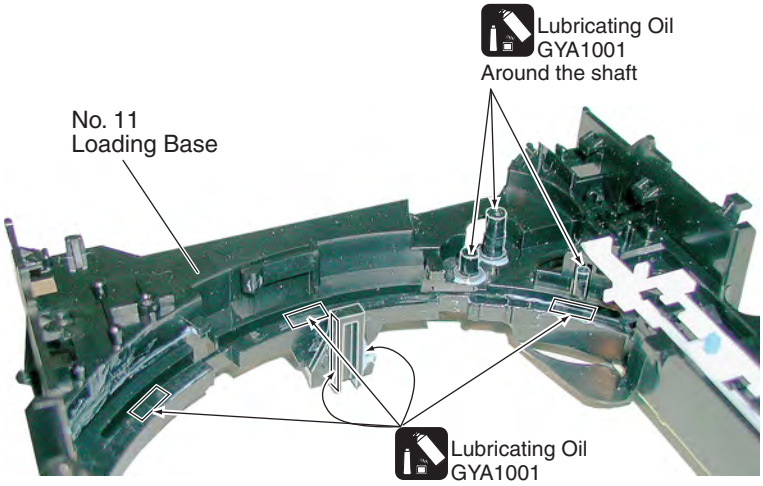
Refer to
" ■ Application of Lubricant".

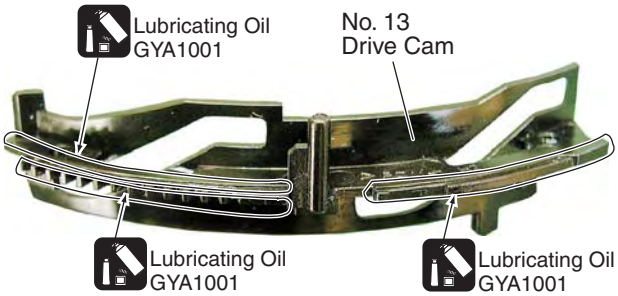


06 LOADER ASSY PARTS LIST

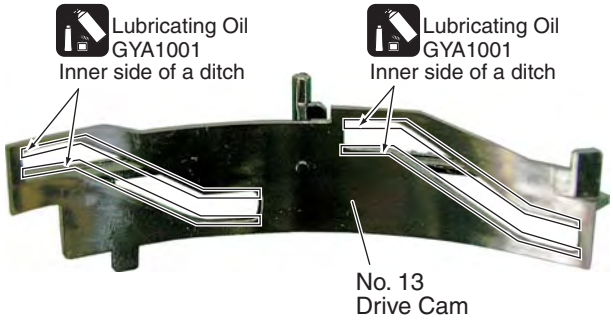
Mark	No.	Description	Part No.
NSP	1	LOAB Assy	VWG2346
	2	Traverse Mechanism Assy-S	DXX2575
	3	Loading Motor Assy	VXX2912
	4	• • • • •	
	5	• • • • •	
	6	Flexible Cable (24P)	XDD3246
	7	Connector Assy 2P	VKP2253
	8	Floating Rubber	VEB1351
	9	Belt	VEB1358
	10	Stabilizer	VNE2253
	11	Loading Base	VNL1917
	12	Float Base 04	VNL1968
	13	Drive Cam	VNL1919
	14	Gear Pulley	VNL1921
	15	Loading Gear	VNL1922
	16	Drive Gear	VNL1923
	17	SW Lever	VNL1925
	18	Clamper Plate 04	VNE2342
	19	Bridge 04	VNE2343
	20	Clamper 04	VNL1969
	21	Screw	JGZ17P028FTC
	22	Screw	VBA1094
	23	Tray	VNL1920
	24	Clamp Magnet	VMG1029

Application of Lubricant

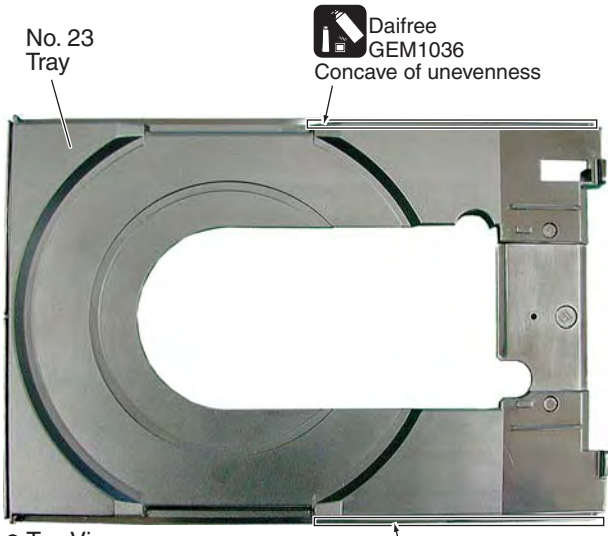




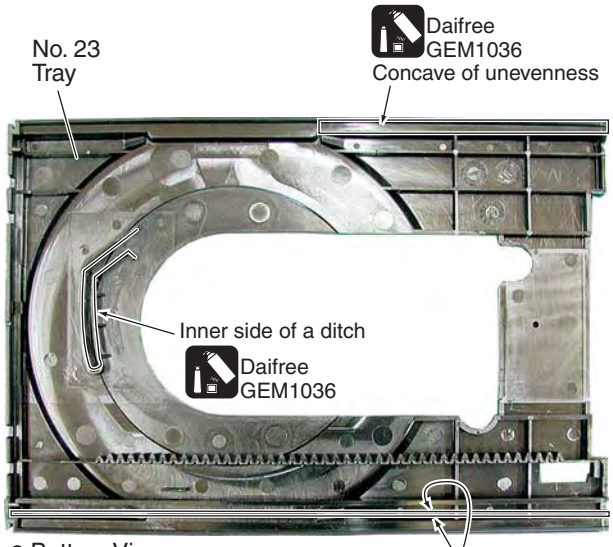
● Front View



● Rear View



● Top View

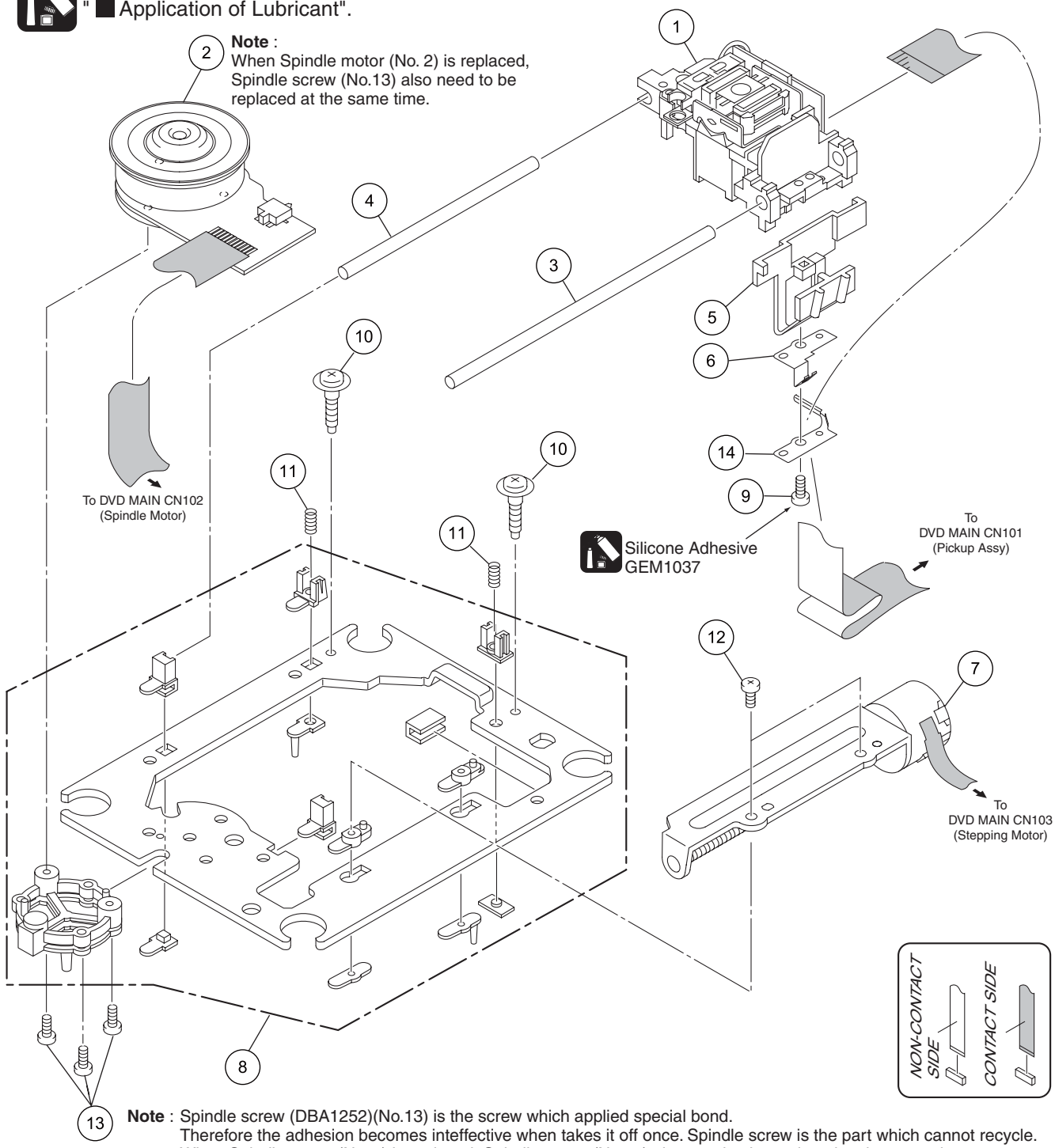


● Bottom View

9.5 TRAVERSE MECHANISM ASSY-S

Note :

Refer to
" ■ Application of Lubricant".



Note : Spindle screw (DBA1252)(No.13) is the screw which applied special bond.
Therefore the adhesion becomes inteffective when takes it off once. Spindle screw is the part which cannot recycle.
When Spindle motor (No. 2) is replaced, Spindle screw (No.13) also need to be replaced at the same time.

TRAVERSE MECHANISM ASSY-S PARTS LIST

Mark	No.	Description	Part No.
⚠	1	06SD Pickup Assy-S	OXY8087
	2	Spindle Motor N200	DXM1197
NSP	3	Guide Shaft VK1	DLA1940
NSP	4	Sub Guide Shaft VK1	DLA1941
NSP	5	Joint VK1B	DNK4272
NSP	6	Joint Spring VK1	DBK1235
	7	Stepping Motor VK1	DXM1201
NSP	8	Mechanism Frame VK1	DNK4160
	9	Precision Screw VK1	DBA1209
	10	Skew Screw VK1	DBA1211
	11	Skew Spring VK1	DBH1516
NSP	12	Stepping Screw	DBA1205
	13	Spindle Screw VK1(for Service)	DBA1252
NSP	14	Hold Spring	DBK1297

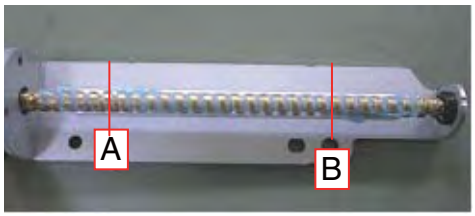
PRECAUTIONS WHEN REPLACING THE STEPPING MOTOR (DXM1201)

You must apply grease to the following locations when replacing the stepping motor. Follow the instructions below to apply grease to these locations.

(1) Stepping motor feed screw

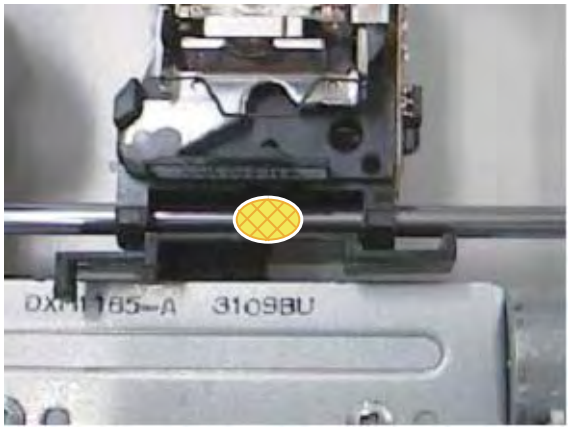
- Apply grease GYA1001 to the 3 locations in the picture
- Amount of grease: 3 ± 1 mg each for 3 locations

After applying GYA1001, smooth the grease evenly over the stepping motor feed screw as shown in the picture.
Take care not to scratch the shaft.



Spread the GYA1001 grease from screw hole A to B shown in the picture.
Fibers or dirt in the grease have an adverse affect on operation and must be removed.

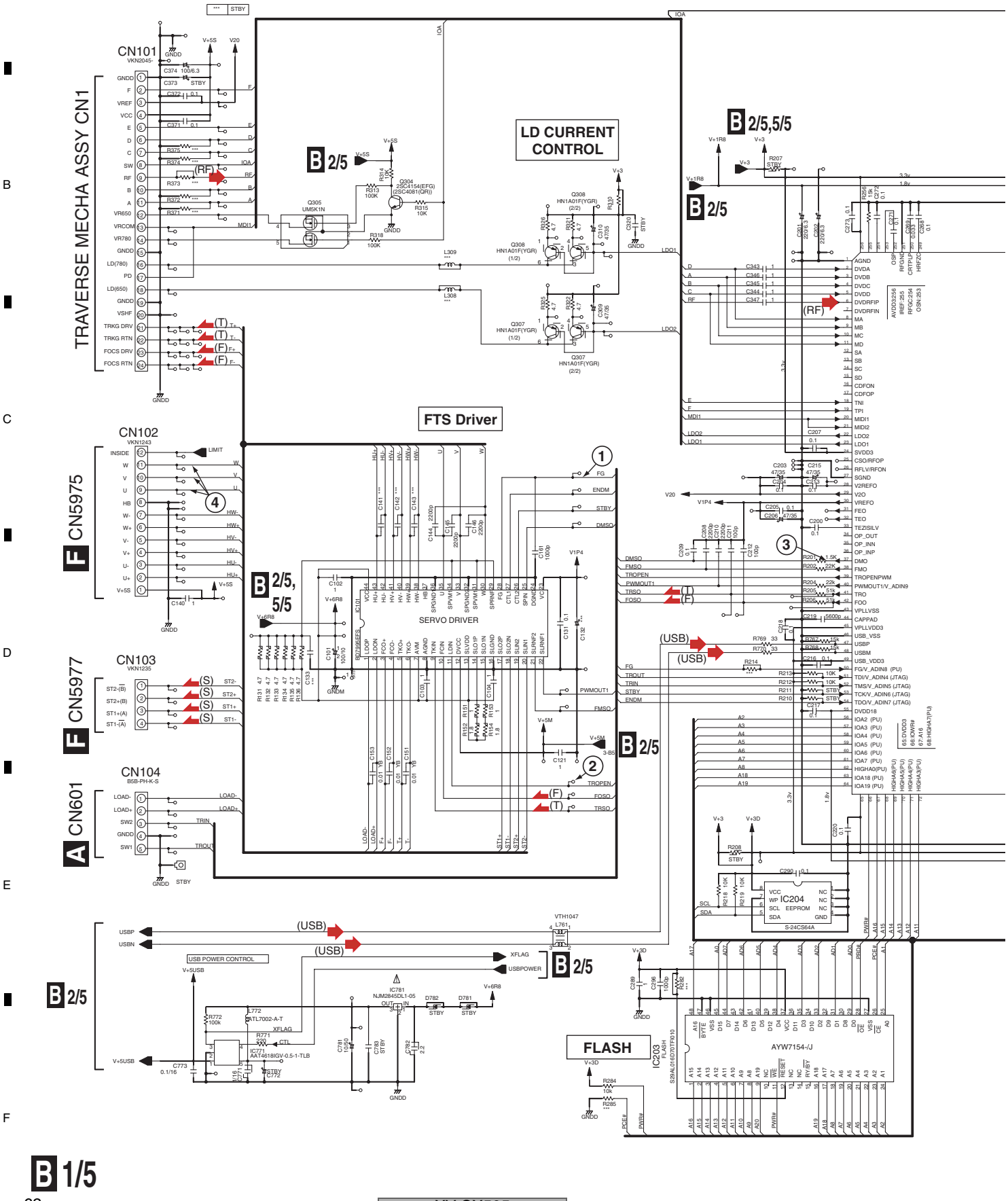
(2) Guide bar



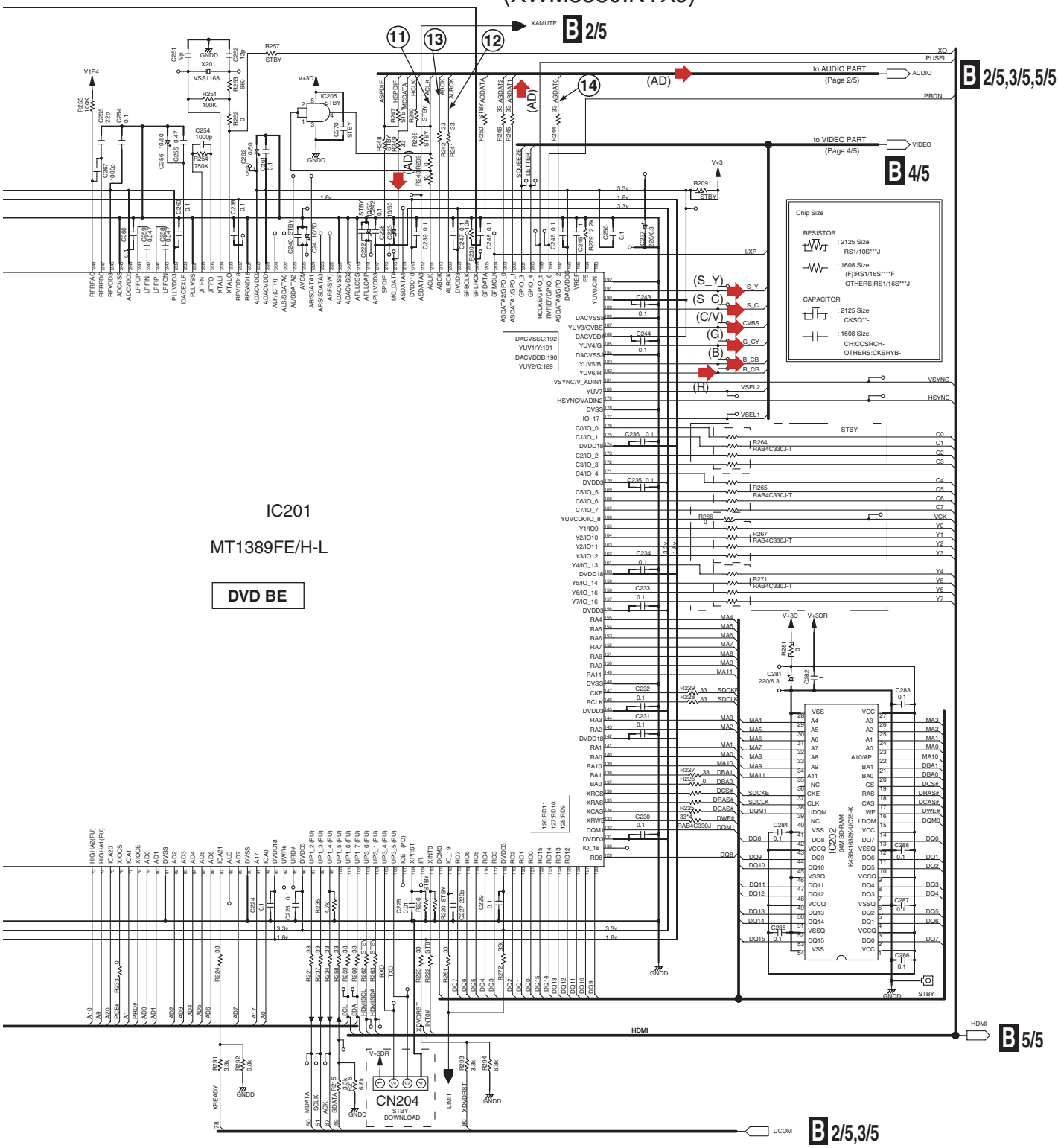
- Apply grease GYA1001 to the crosshatched area shown in the center of the picture
- Amount of grease: 2 ± 1 mg for 1 location

10. SCHEMATIC DIAGRAM

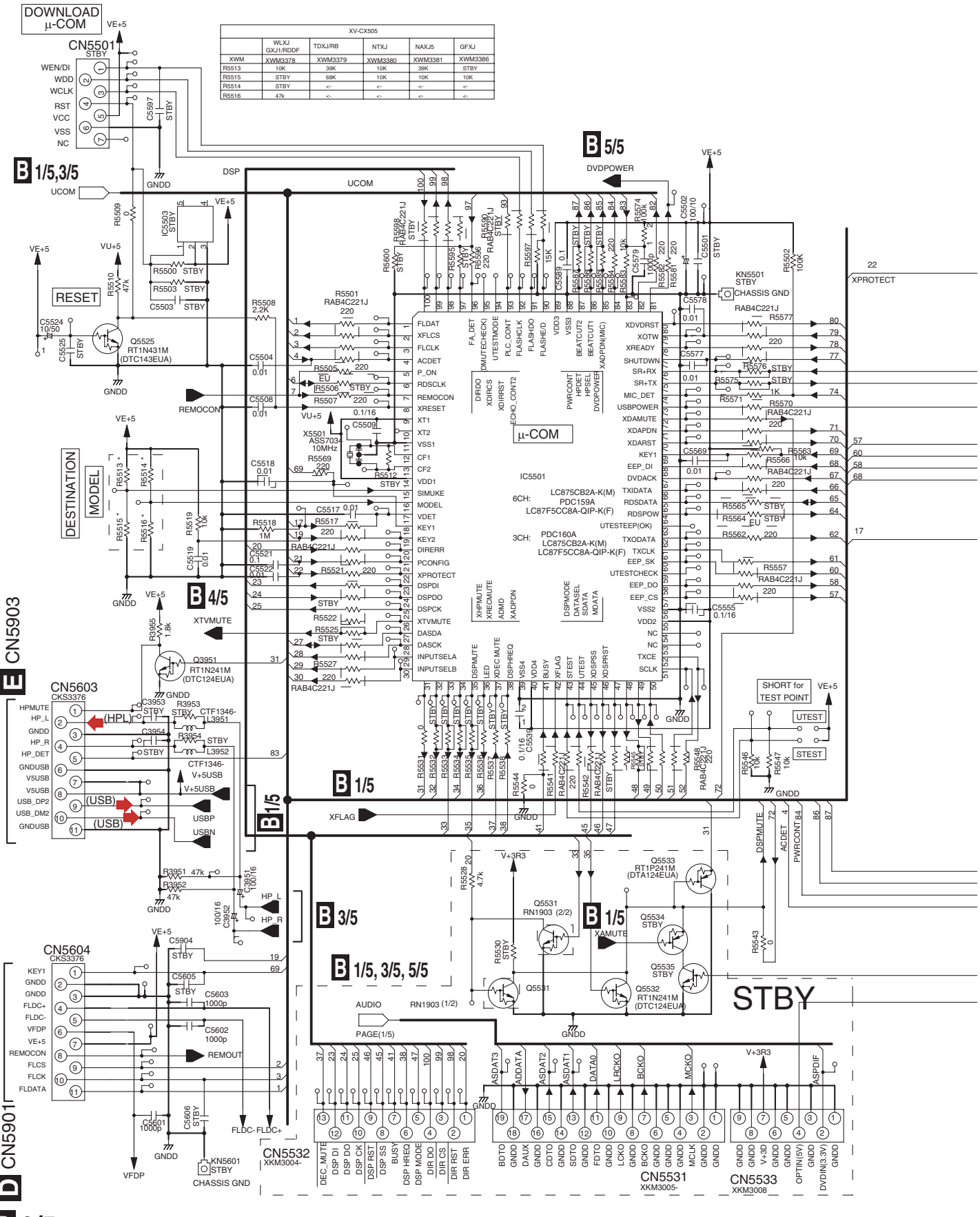
10.1 DVD MAIN ASSY (1/5)



B 1/5 DVD MAIN ASSY
(XWM3386:GFXJ) (XWM3379:TDXJ/RB)
(XWM3381:NAXJ5) (XWM3378:WLXJ, GXJ/RDDF)
(XWM3380:NTXJ)

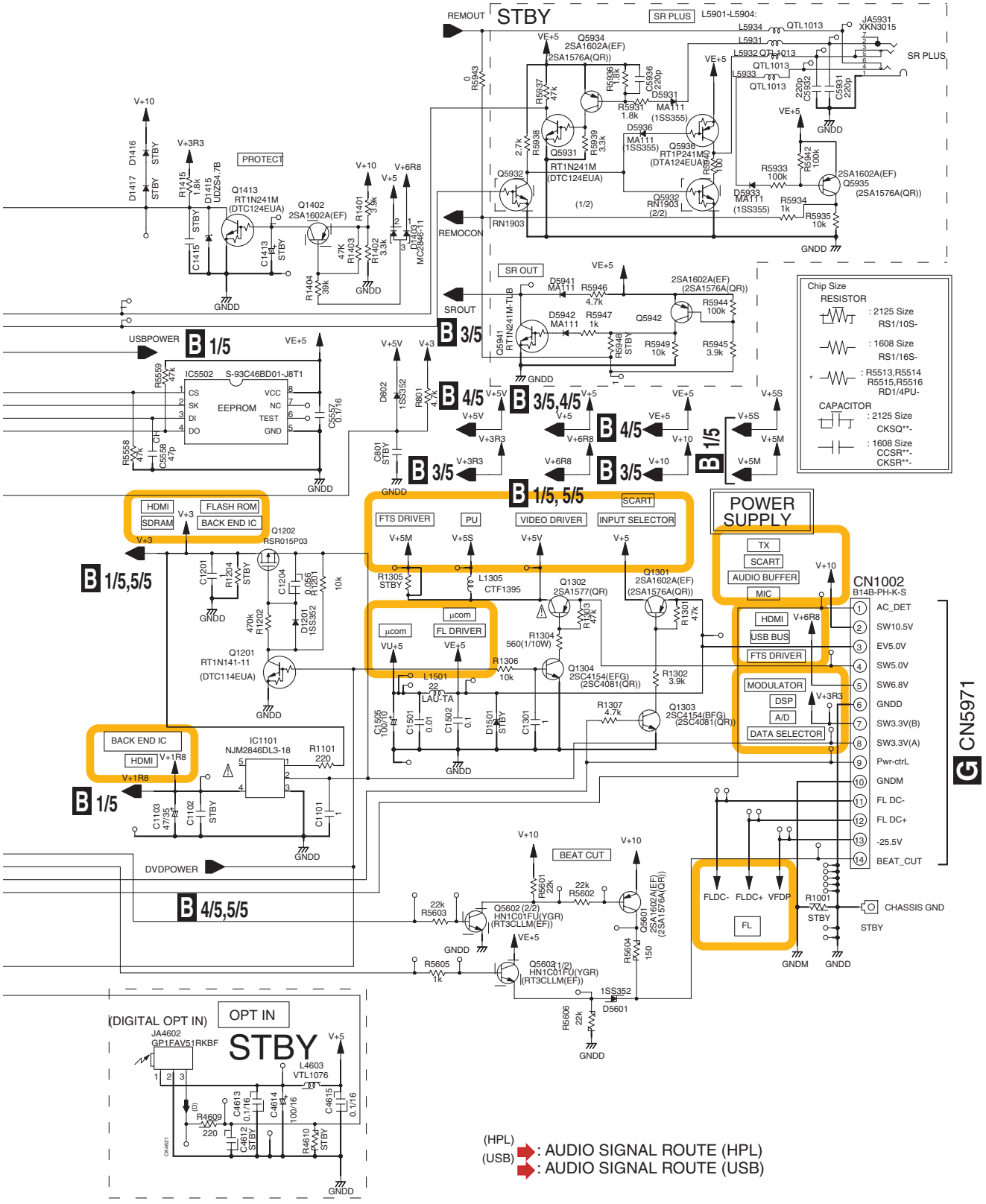


10.2 DVD MAIN ASSY (2/5)

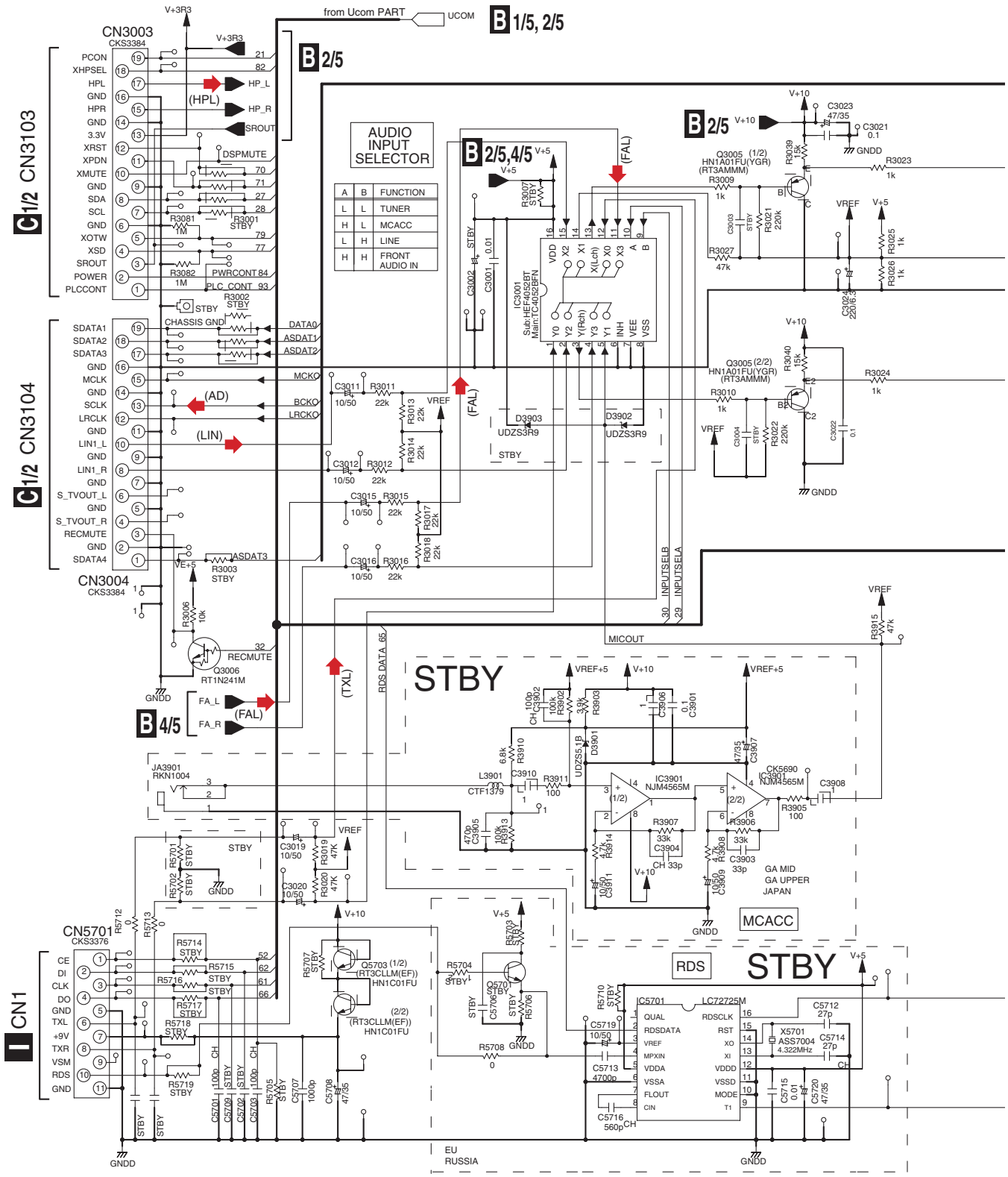


XV-CX505					
	WLXJ GXJ1/RDDF	TDXJ/RB	NTXJ	NAXJ5	GFXJ
XWM	XWM3378	XWM3379	XWM3380	XWM3381	XWM3386
R5513	10K	39K	10K	39K	STBY
R5515	STBY	68K	10K	10K	10K
R5514	STBY	<-	<-	<-	<-
R5516	47k	<-	<-	<-	<-

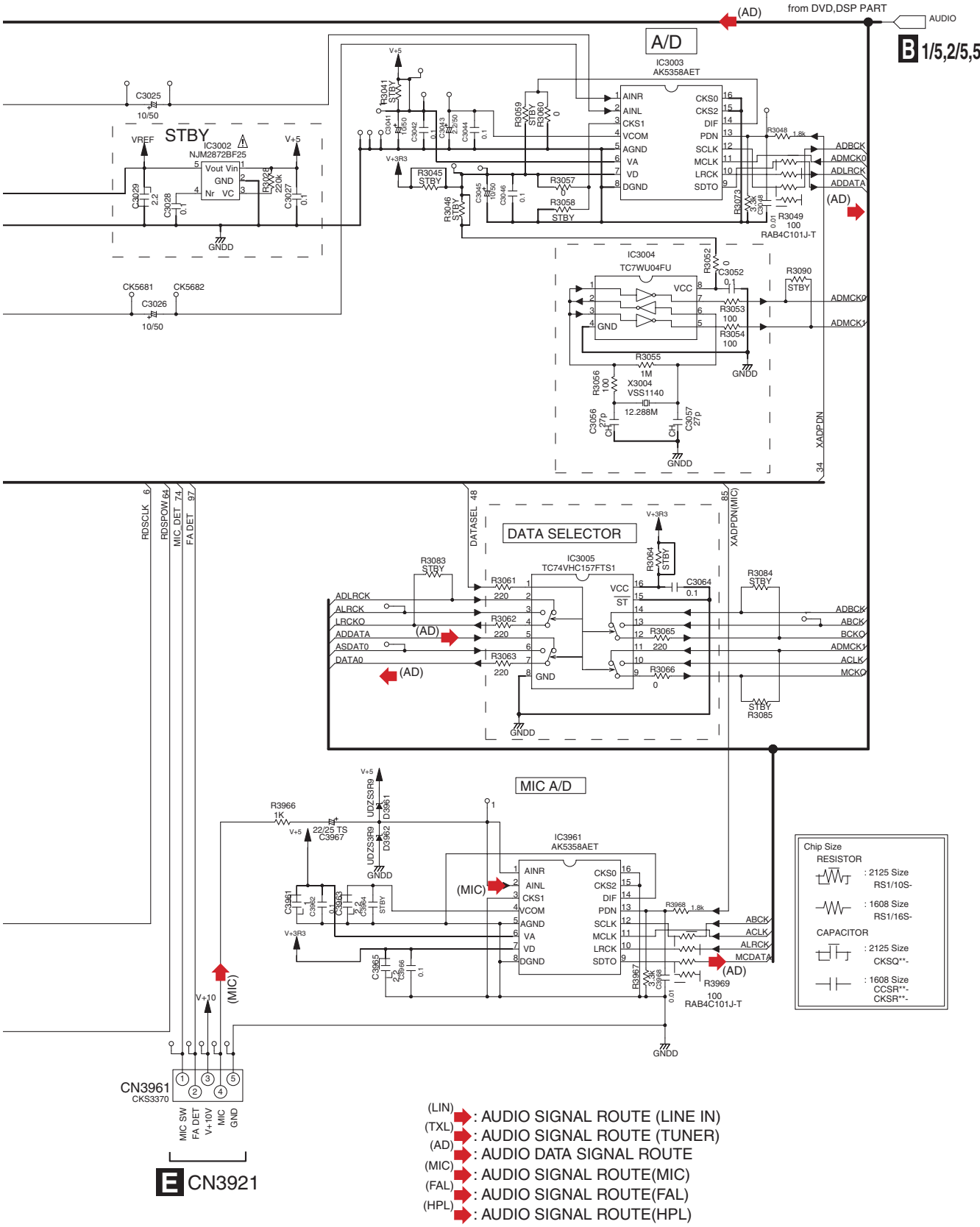
B 2/5 DVD MAIN ASSY
(XWM3386:GFXJ) (XWM3379:TDXJ/RB)
(XWM3381:NAXJ5) (XWM3378:WLXJ, GXJ/RDDF)
(XWM3380:NTXJ)



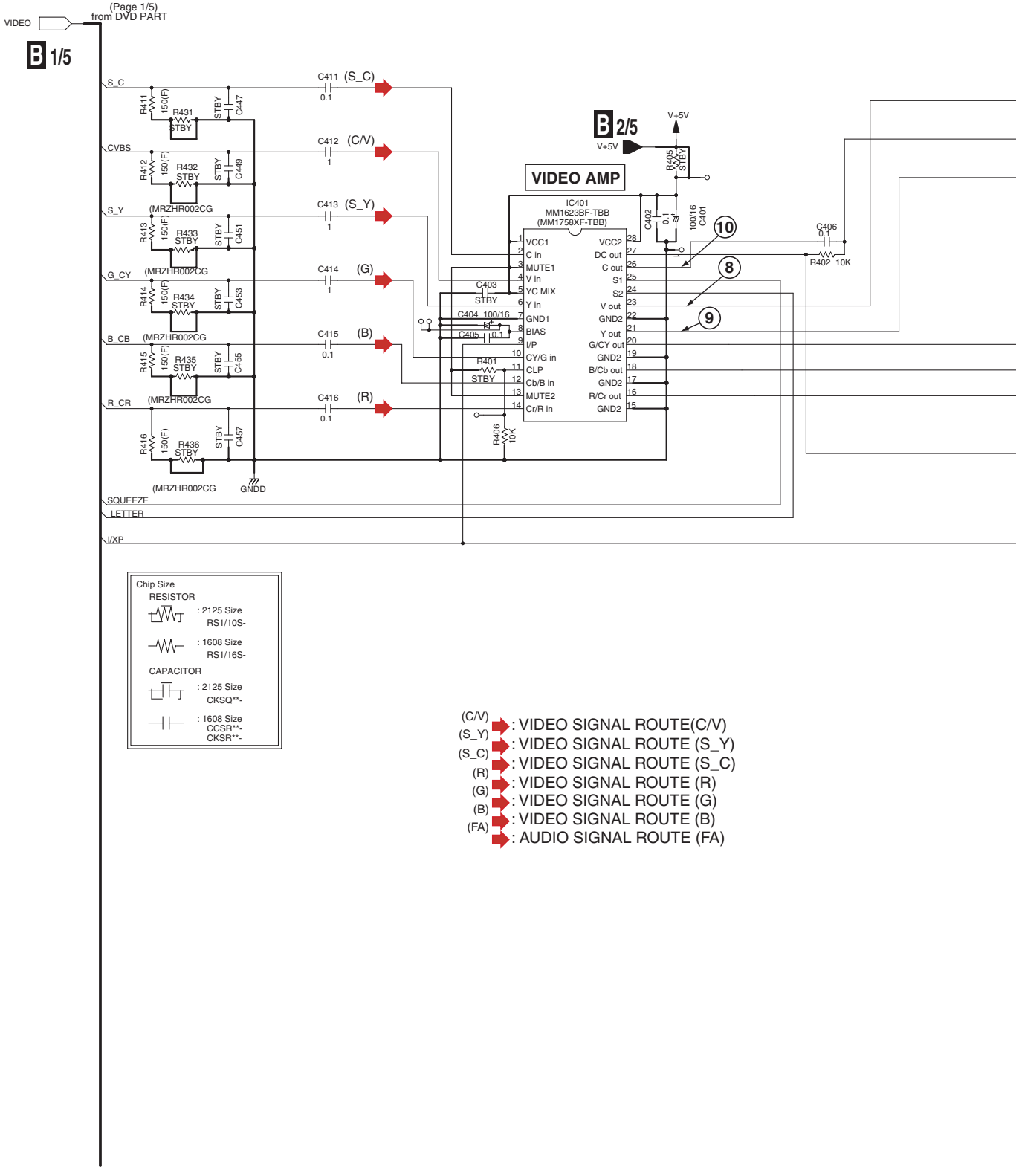
10.3 DVD MAIN ASSY (3/5)



B 3/5 DVD MAIN ASSY (XWM3386:GFXJ) (XWM3379:TDXJ/RB) (XWM3381:NAXJ5) (XWM3378:WLXJ, GXJ/RDDF) (XWM3380:NTXJ)



10.4 DVD MAIN ASSY (4/5)

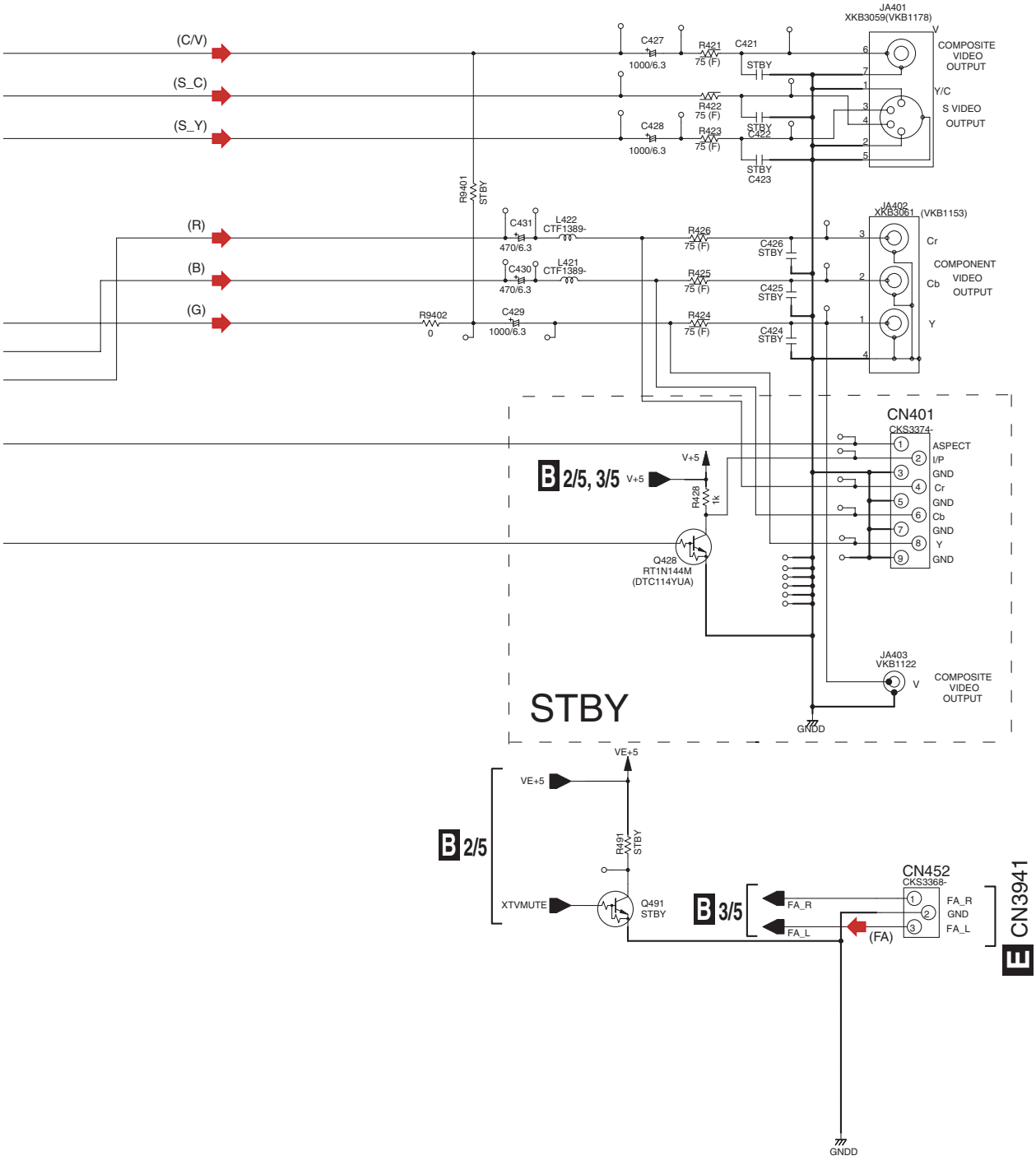


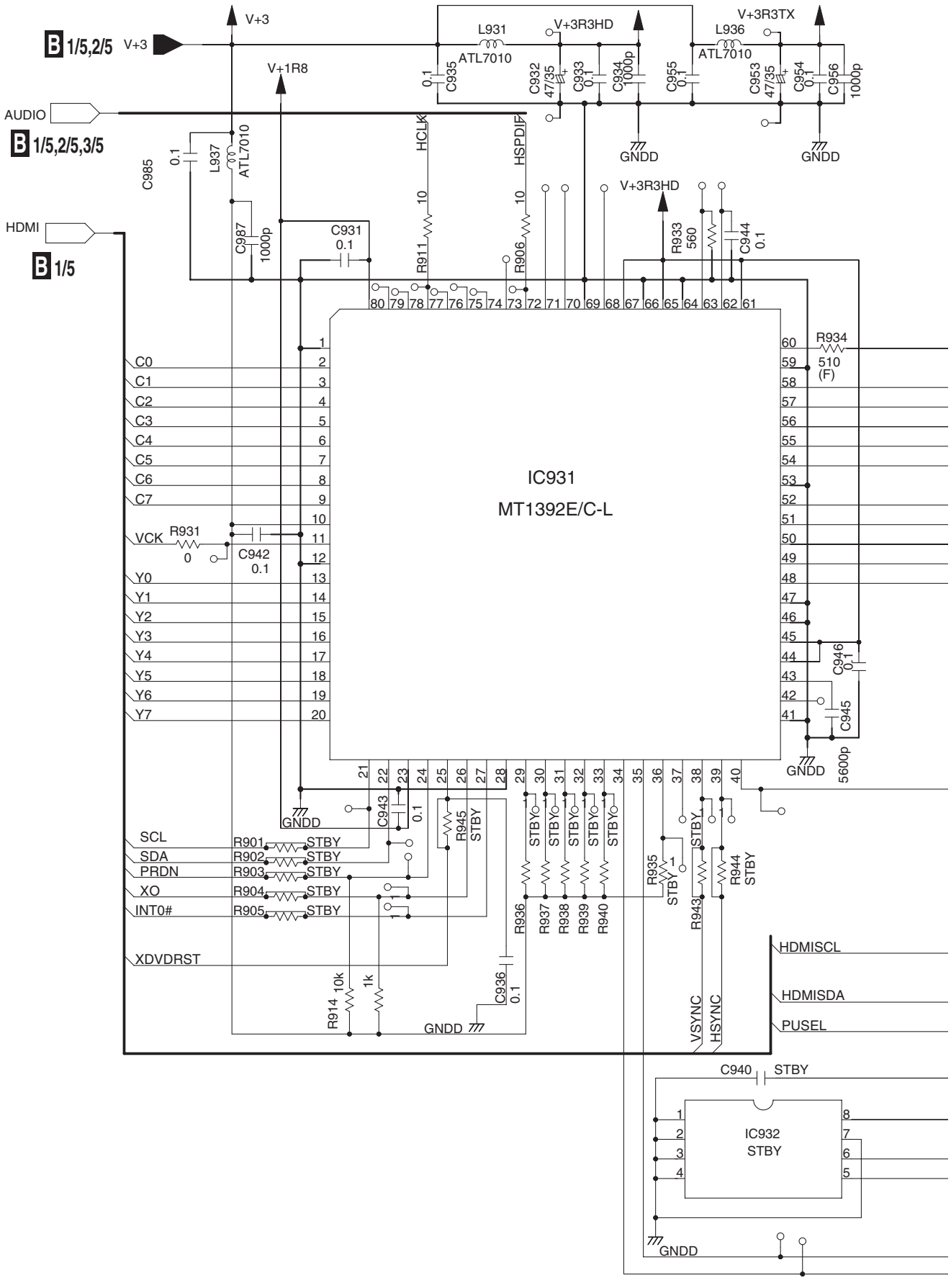
Chip Size
RESISTOR
: 2125 Size RS1/10S-
: 1608 Size RS1/16S-
CAPACITOR
: 2125 Size CKSQ**-
: 1608 Size CCSR**- CKSR**-

(C/V) : VIDEO SIGNAL ROUTE(C/V)
(S_Y) : VIDEO SIGNAL ROUTE (S_Y)
(S_C) : VIDEO SIGNAL ROUTE (S_C)
(R) : VIDEO SIGNAL ROUTE (R)
(G) : VIDEO SIGNAL ROUTE (G)
(B) : VIDEO SIGNAL ROUTE (B)
(FA) : AUDIO SIGNAL ROUTE (FA)

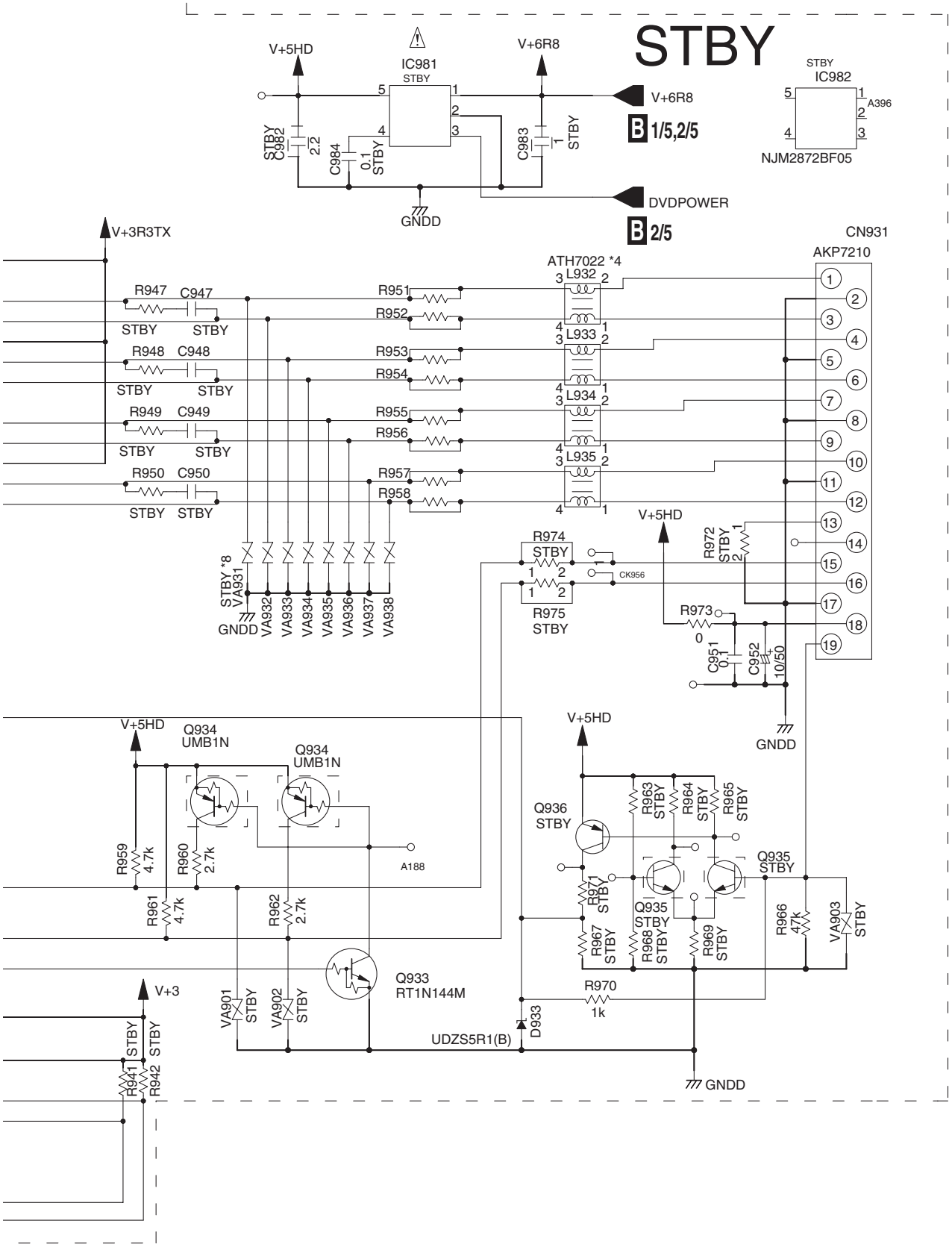
B 4/5

B 4/5 DVD MAIN ASSY (XWM3386:GFXJ) (XWM3379:TDXJ/RB) (XWM3381:NAXJ5) (XWM3378:WLXJ, GXJ/RDDF) (XWM3380:NTXJ)

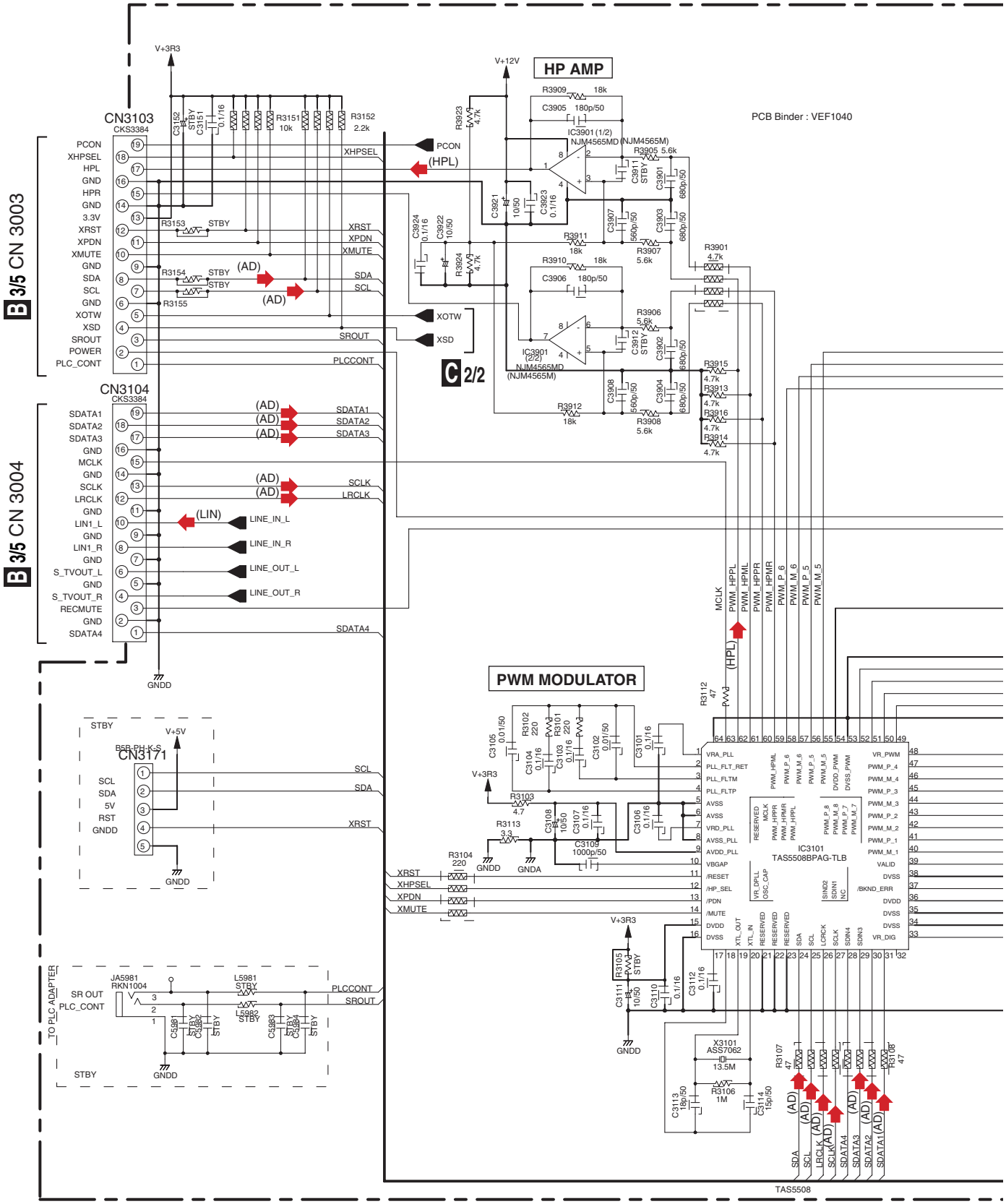



B 1/5,2/5 V+3
AUDIO
B 1/5,2/5,3/5
HDMI
B 1/5
V+3
V+1R8
L931 ATL7010
V+3R3HD
L936 ATL7010
V+3R3TX
C935 0.1
C932 47/35
C933 0.1
C934 1000p
C955 0.1
C953 47/35
C954 0.1
C956 1000p
GNDD
L937 ATL7010
C985 0.1
C987 1000p
C931 0.1
HCLK
HSPDIF
R911 10
R906 10
R933 560
C944 0.1
IC931
MT1392E/C-L
C0
C1
C2
C3
C4
C5
C6
C7
VCK
R931 0
C942 0.1
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
R934 510 (F)
C946 0.1
C945 5600p
C943 0.1
R945 STBY
SCL
SDA
PRDN
XO
INT0#
R901 STBY
R902 STBY
R903 STBY
R904 STBY
R905 STBY
R936
R937
R938
R939
R940
R935 1
R944 STBY
R943
XDVDRST
R914 10k
1k
C936 0.1
HDMISCL
HDMISDA
PUSEL
VSYNC
HSYNC
C940 STBY
IC932
STBY
B 5/5

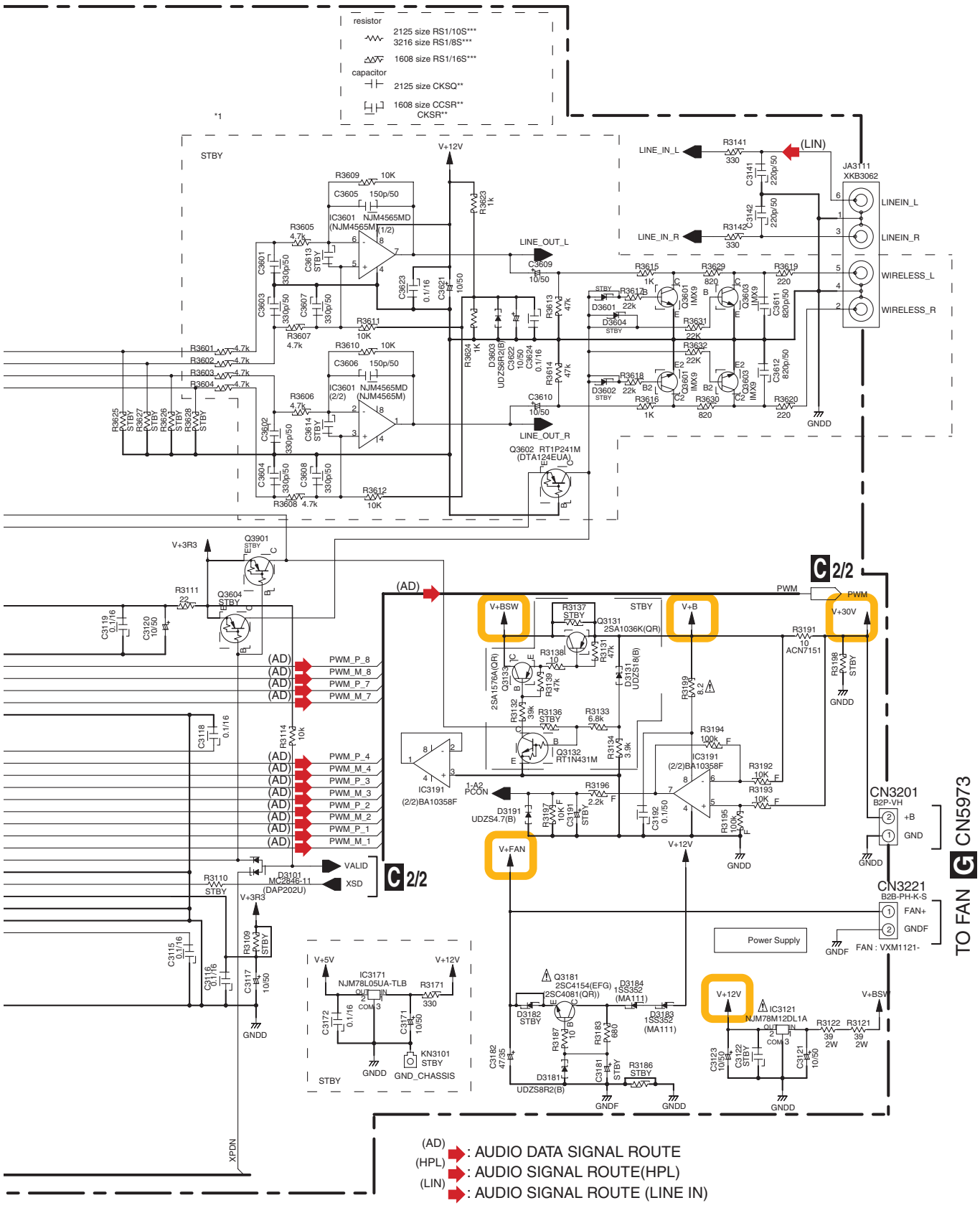
STBY


V+5HD
IC981
STBY
V+6R8
V+6R8
B 1/5,2/5
DVDPOWER
B 2/5
GNDD
C982 2.2 STBY
C984 0.1 STBY
C983 1 STBY
IC982
NJM2872BF05
A396
V+3R3TX
CN931
AKP7210
ATH7022 *4
L932
L933
L934
L935
R947 C947 STBY STBY
R948 C948 STBY STBY
R949 C949 STBY STBY
R950 C950 STBY STBY
R951
R952
R953
R954
R955
R956
R957
R958
STBY *8 VA931
VA932
VA933
VA934
VA935
VA936
VA937
VA938
R974 STBY
R975 STBY
CK956
R972 STBY
R973 0
C951 0.1
C952 10/50
V+5HD
GNDD
V+5HD
Q934 UMB1N
Q934 UMB1N
R959 4.7k
R960 2.7k
R961 4.7k
R962 2.7k
A188
Q933 RT1N144M
VA901 STBY
VA902 STBY
V+3
R941 STBY
R942 STBY
V+5HD
Q936 STBY
R963 STBY
R964 STBY
R965 STBY
Q935 STBY
R971 STBY
Q935 STBY
R967 STBY
R968 STBY
R969 STBY
R966 47k
VA903 STBY
R970 1k
D933 UDZS5R1(B)
GNDD

10.6 HAMP ASSY (1/2)



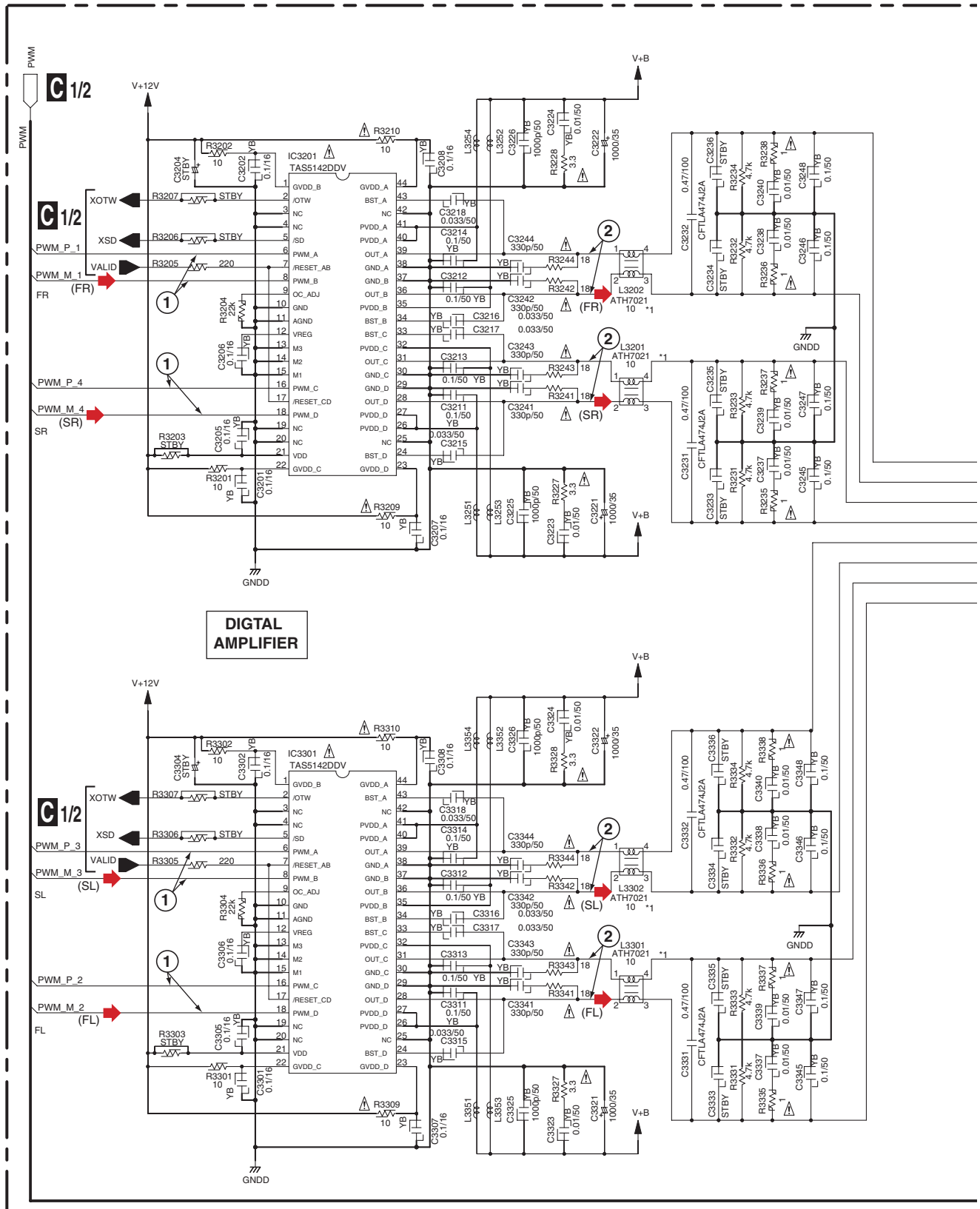
C 1/2 HAMP ASSY (XWK3327)



(AD) : AUDIO DATA SIGNAL ROUTE
(HPL) : AUDIO SIGNAL ROUTE(HPL)
(LIN) : AUDIO SIGNAL ROUTE (LINE IN)

C 1/2

10.7 HAMP ASSY (2/2)



LAYOUT NOTE :
L325X L335X L345X are a track in the PCB.
L:50mm W:1.6mm

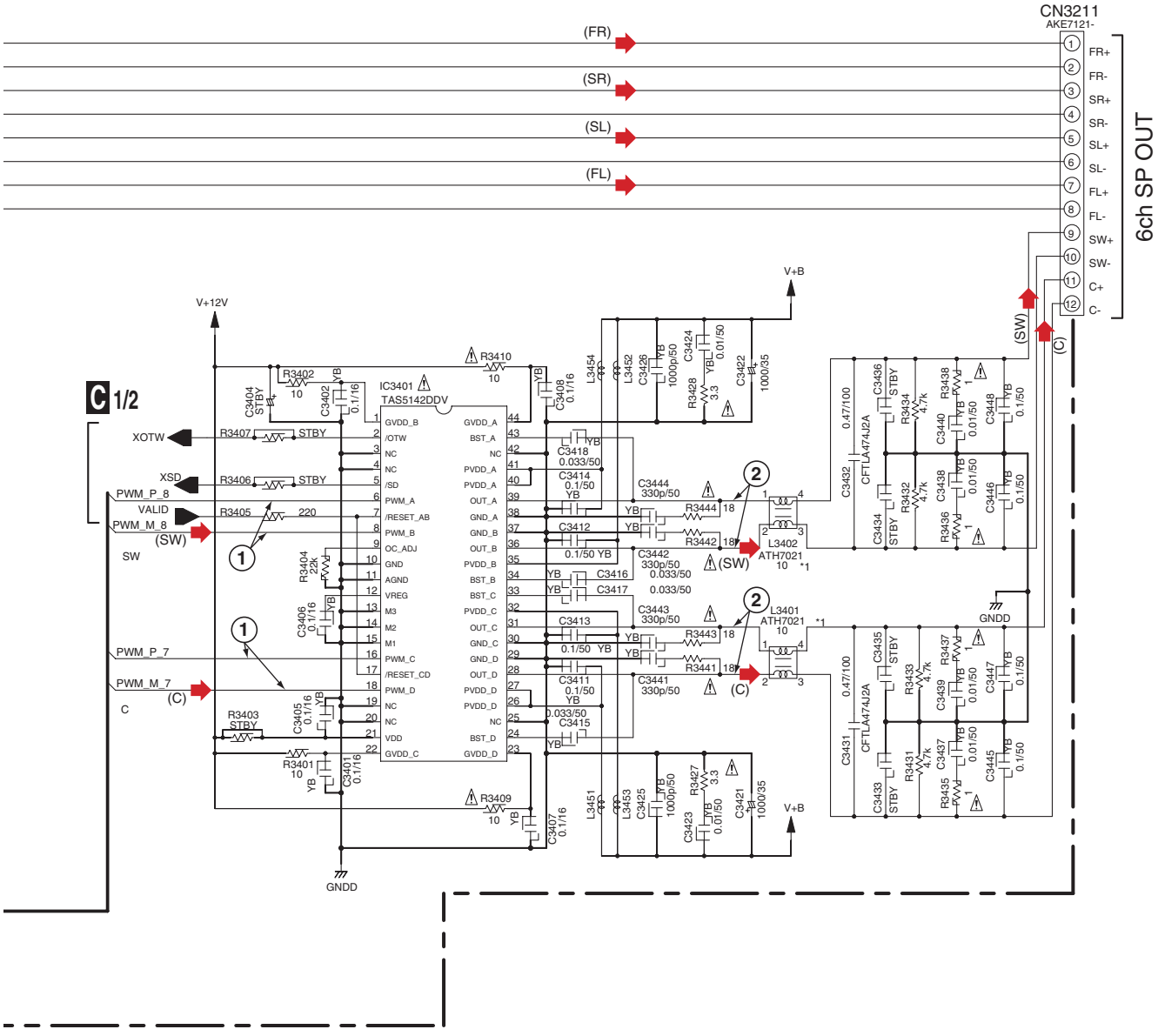
*1
L3201,L3202,L3301,L3302,L3401,L3402 :
ATH7021 • (MDHLA004AH) DUPLICATE CELL
ON ATH7019

C 2/2

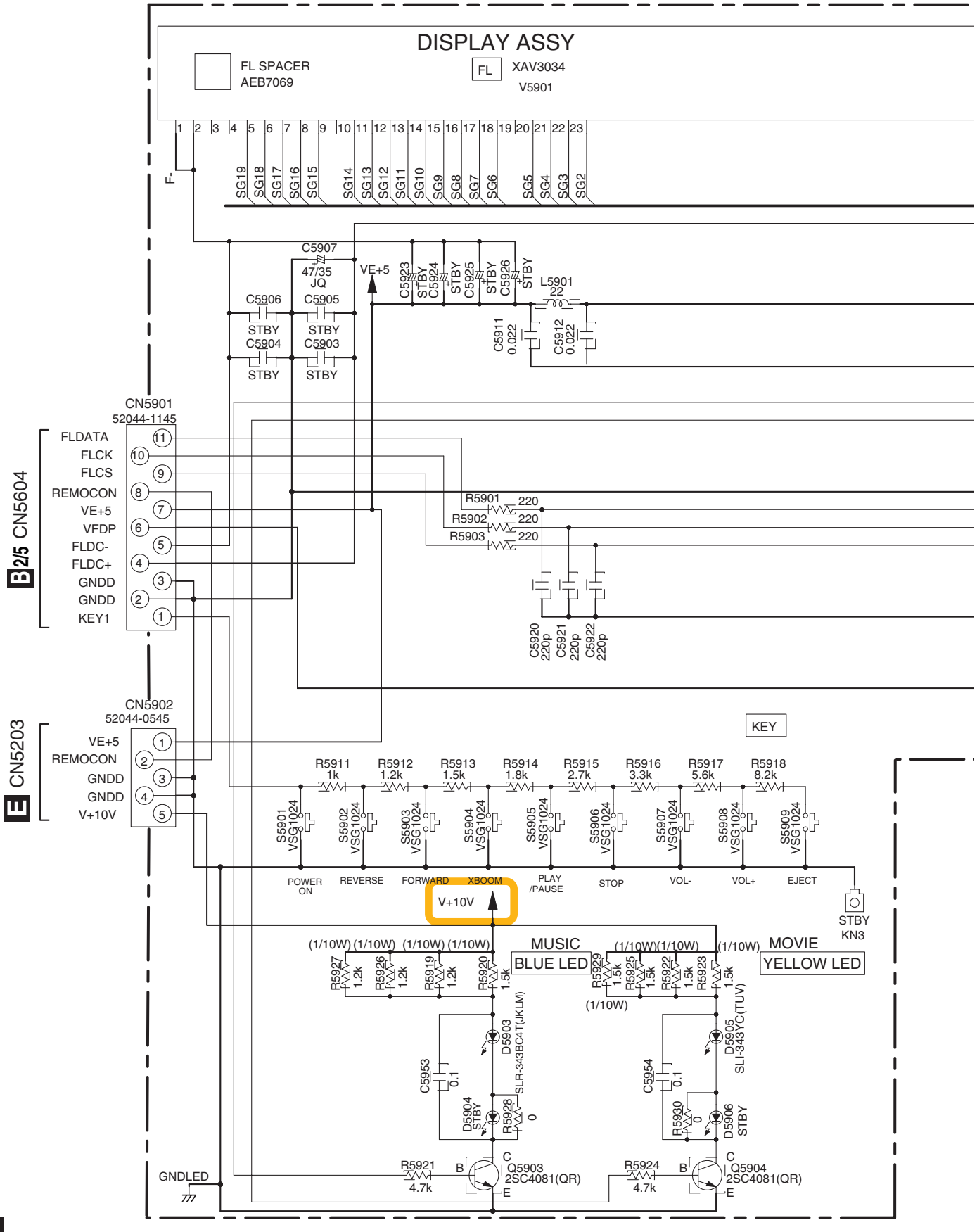
C 2/2 HAMP ASSY (XWK3327)

(SL) : AUDIO DATA SIGNAL ROUTE (Surround Lch)
(SR) : AUDIO DATA SIGNAL ROUTE (Surround Rch)
(FL) : AUDIO DATA SIGNAL ROUTE (Front Lch)
(FR) : AUDIO DATA SIGNAL ROUTE (Front Rch)
(SW) : AUDIO DATA SIGNAL ROUTE (Sub woofer ch)
(C) : AUDIO DATA SIGNAL ROUTE (Center ch)

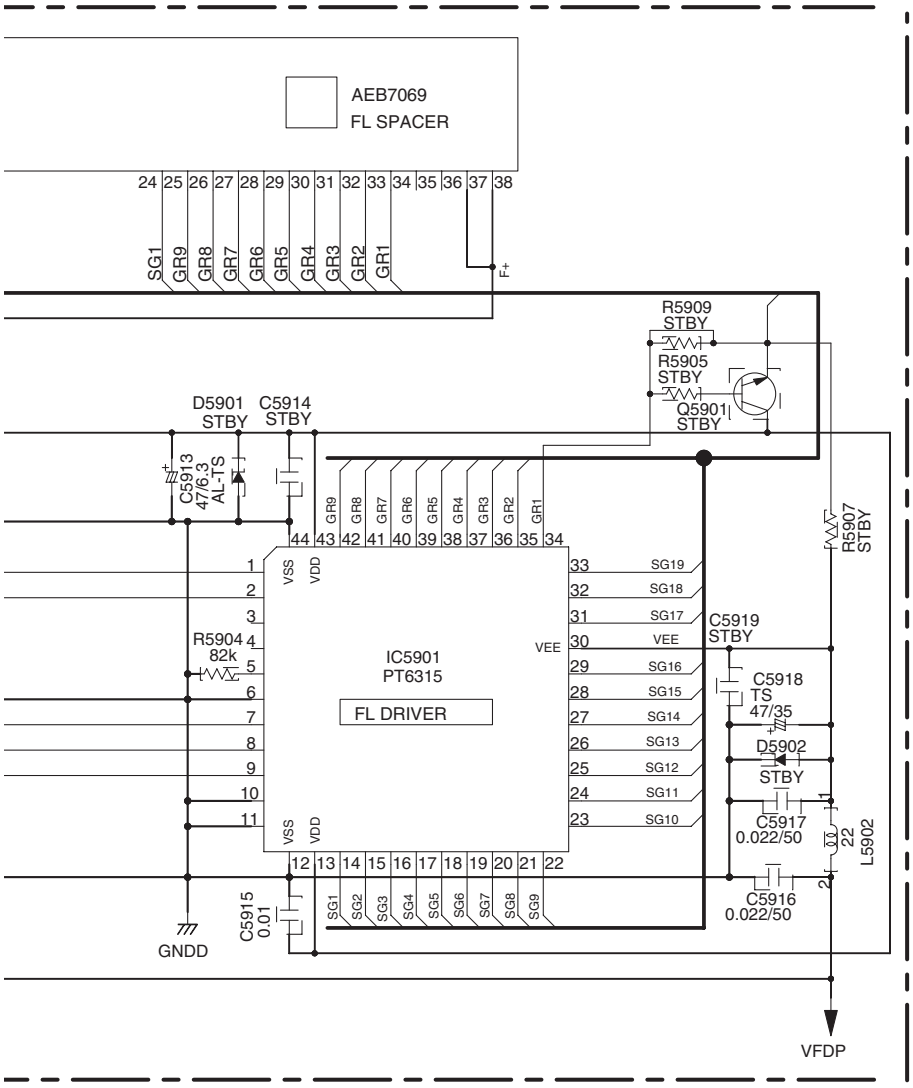
Heatsink : ANH7190



10.8 DISPLAY ASSY



D DISPLAY ASSY (XWZ4275)



NOTES

ALL CAPACITORS ARE IN μF

UNLESS OTHERWISE SPECIFIED

CKSRYB**K50

JQ : CEJQ**M**

AL : CEAL**M**

AT : CEAT**M**

ALL RESISTORS ARE IN Ω

RS1/16S***J

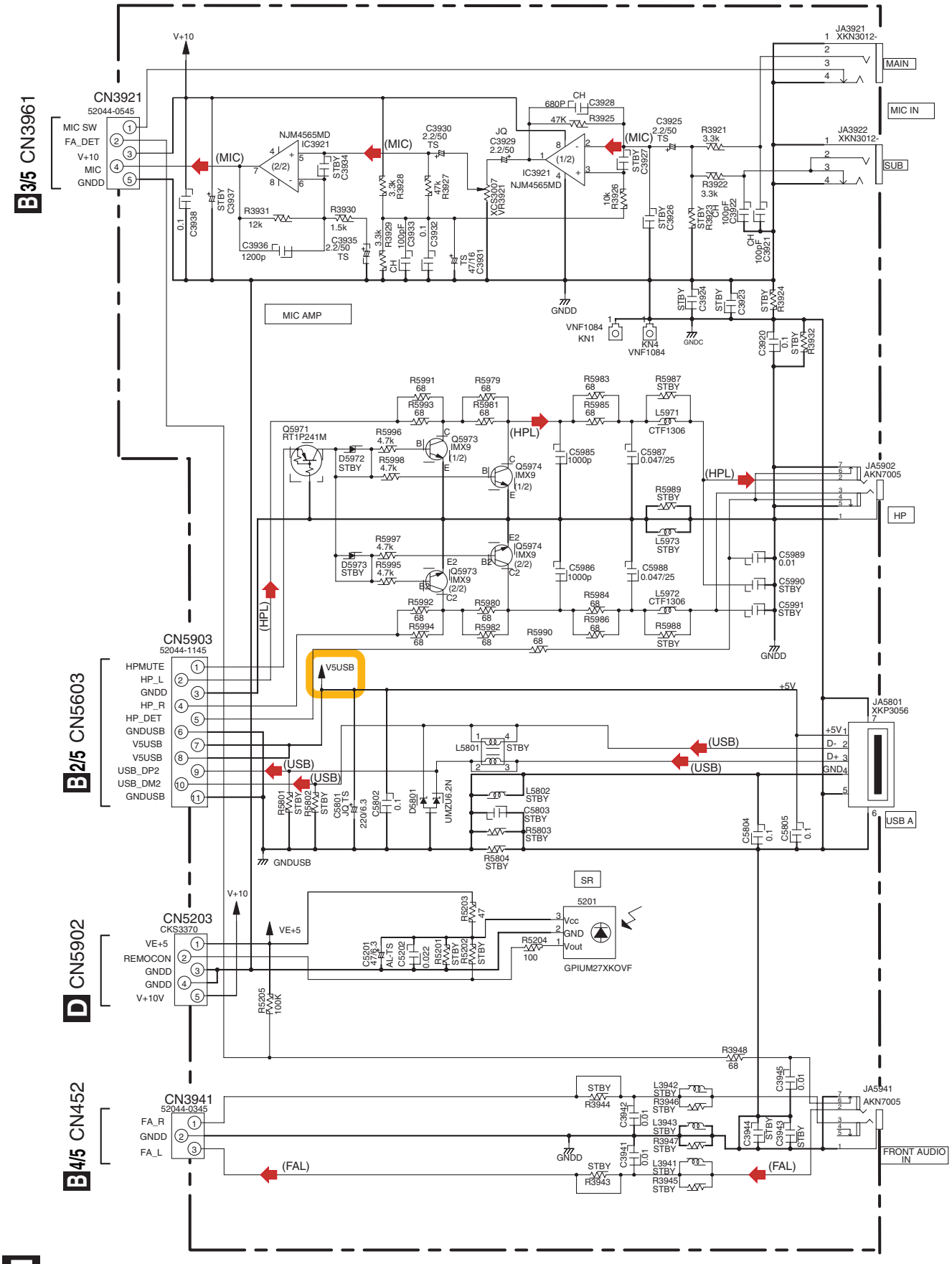
RS1/10S***J

ALL INDUCTORS ARE IN μH

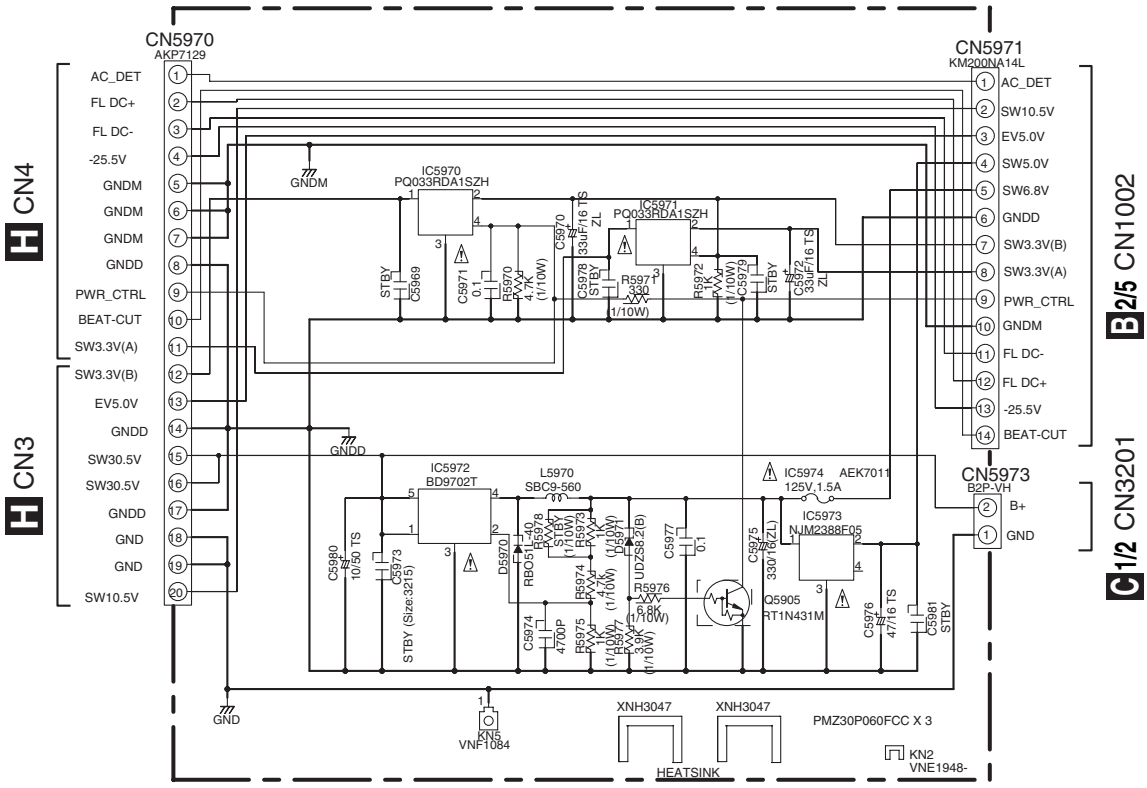
LAU***J-TA

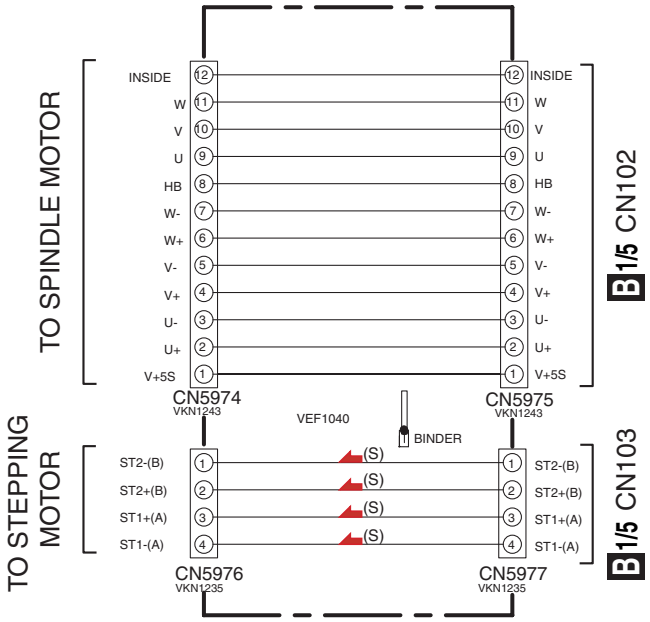
10.9 HP/MIC, REGULATOR TRADE and DVD TRADE ASSYS

E HP/MIC ASSY (XWZ4276)



G REGULATOR TRADE ASSY (XWZ4278)





(S) : STEPPING SERVO LOOP LINE
(MIC) : AUDIO SIGNAL ROUTE (MIC)
(HPL) : AUDIO SIGNAL ROUTE (HPL)
(USB) : AUDIO SIGNAL ROUTE (USB)
(FAL) : AUDIO SIGNAL ROUTE (FAL)

NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CKSRYB**K50
JQ : CEJQ**M**
AL : CEAL**M**
AT : CEAT**M**

ALL RESISTORS ARE IN Ω

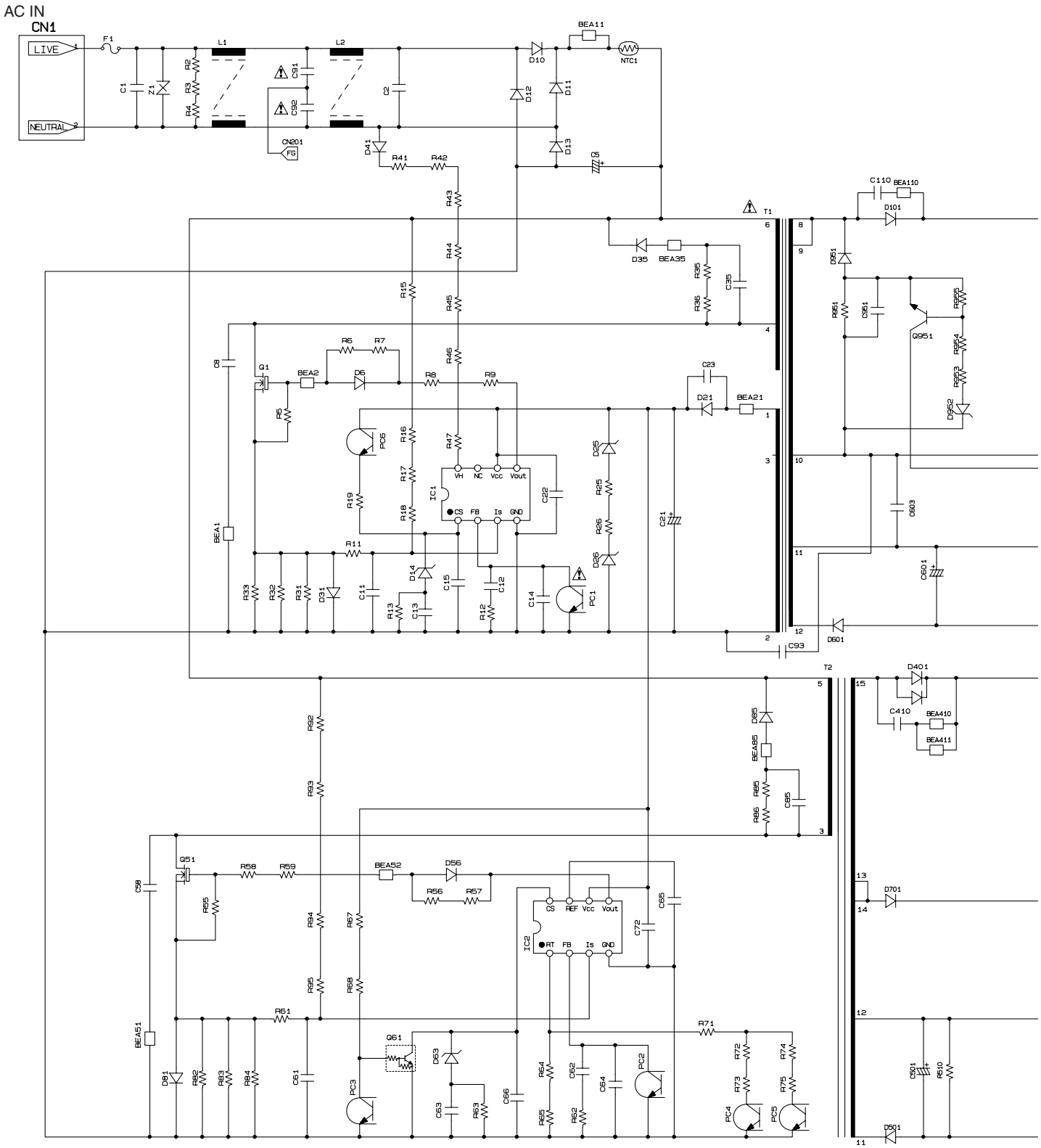
RS1/16S***J
RS1/10S***J

ALL INDUCTORS ARE IN μH

LAU***J-TA

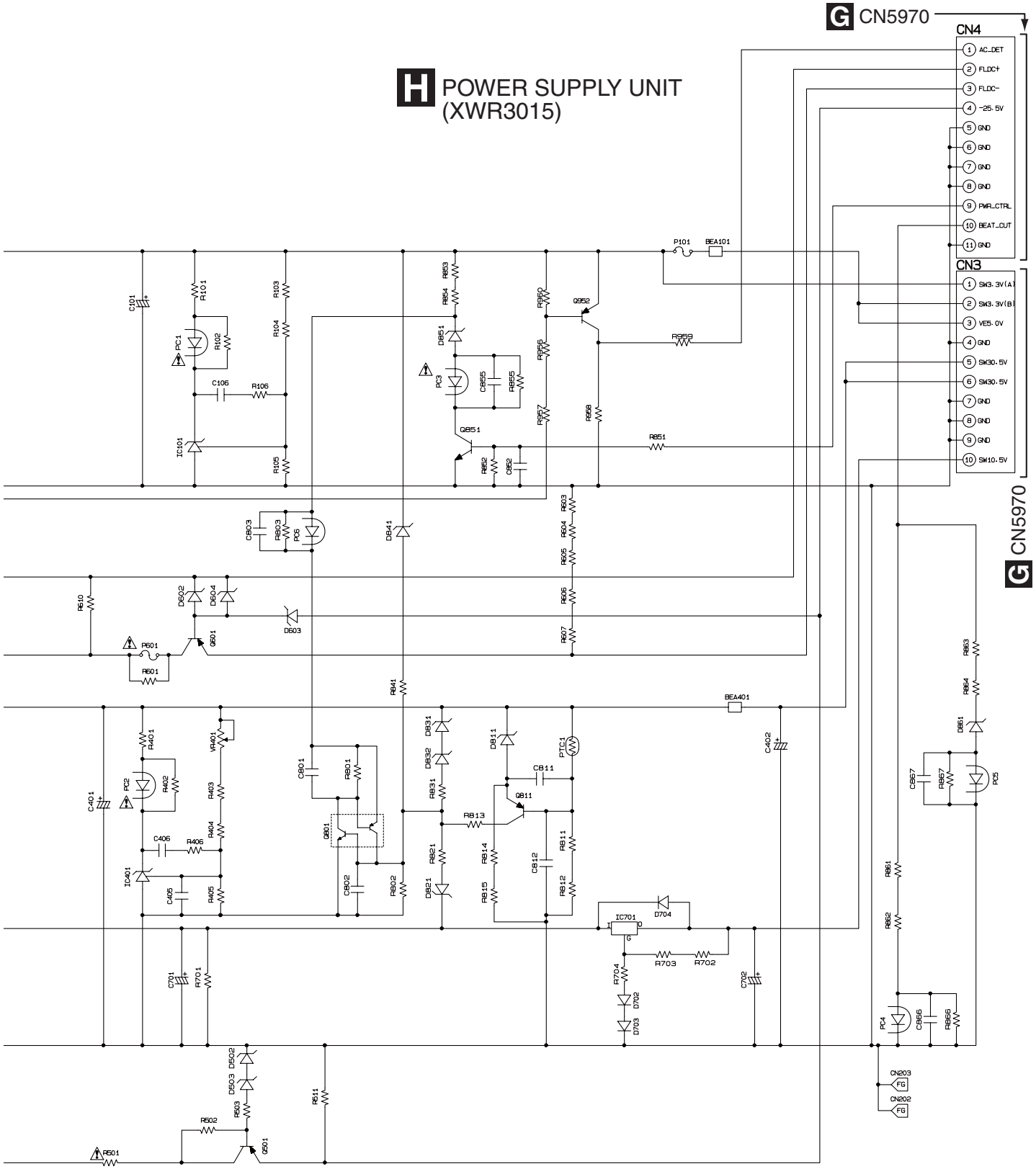
F DVD TRADE ASSY (XWZ4277)

10.10 POWER SUPPLY UNIT



G CN5970

H POWER SUPPLY UNIT (XWR3015)



H

10.11 WAVEFORMS

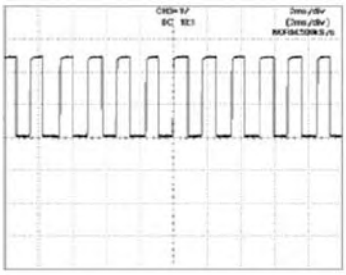
Note : The encircled numbers denote measuring point in the schematic diagram.

B DVD MAIN ASSY

Measurement condition ;

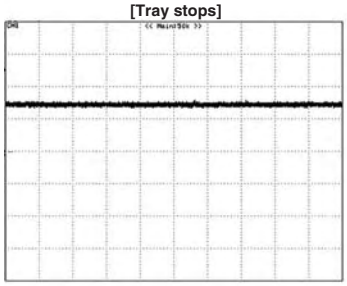
No. 1 to 10 : reference A1 (DVD), T2-chp 19, Color-bar
No. 11 to 14 : reference A1 (DVD), T1

(1) IC201-pin50 [FG]
V: 1V/div. H: 2msec/div.

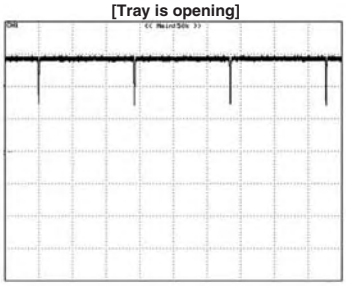


(2) IC201-pin 39 [TROPENPWM]
V: 1V/div. H: 5μsec/div.

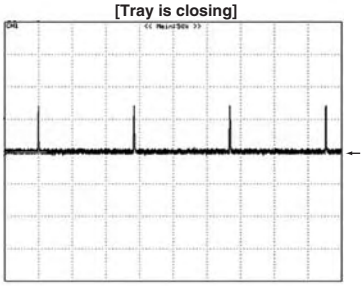
[Tray stops]



[Tray is opening]

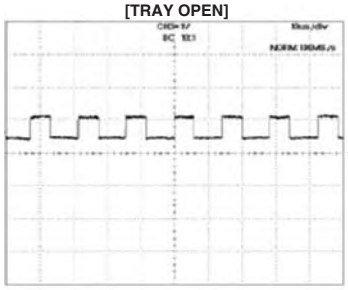


[Tray is closing]



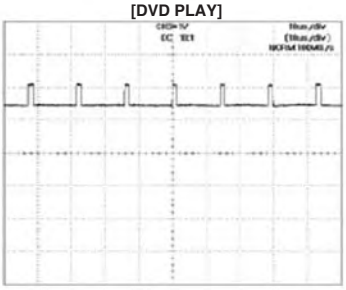
(3) IC201-pin37 [DMSO]
V: 1V/div. H: 10μsec/div.

[TRAY OPEN]



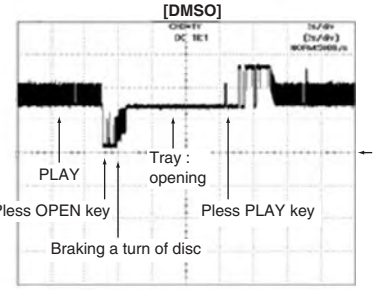
V: 1V/div. H: 10μsec/div.

[DVD PLAY]

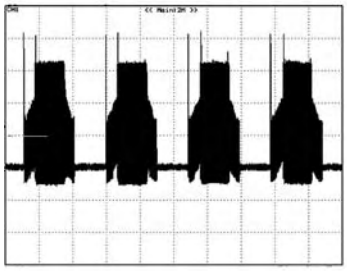


V: 1V/div. H: 2sec/div.

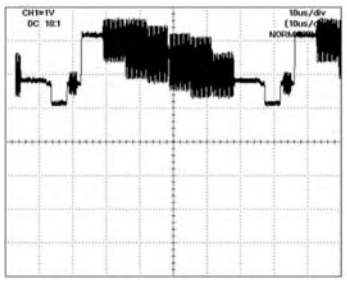
[DMSO]



(4) CN102-pin 11, 10, 9 (IC101-pin 30, 33, 35) [SPINDLE (WVU)]
V: 2V/div. H: 2msec/div.

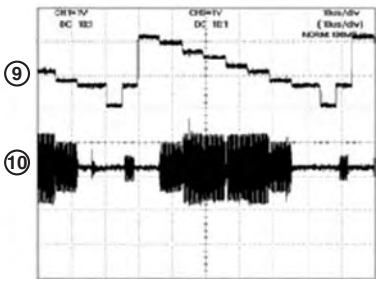


(8) IC401-pin23 [CompositeVideo Out]
V: 1V/div. H: 10μsec/div.

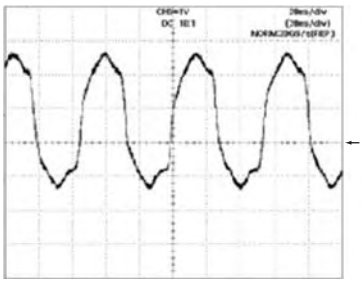


(9) IC401-pin21 [S VIDEO OUT - Y]
V: 1V/div. H: 10μsec/div.

(10) IC401-pin26 [S VIDEO OUT - C]
V: 1V/div. H: 10μsec/div.



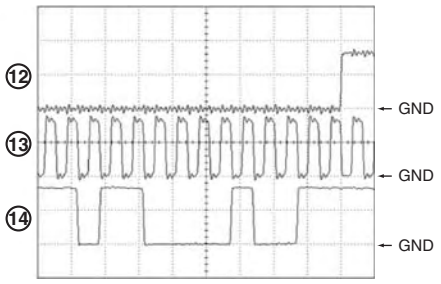
⑪ IC201-pin211 [ACLK]
V: 1V/div. H: 20nsec/div.



⑫ IC201-pin209 [ALRCK]
V: 2V/div. H: 500nsec/div.

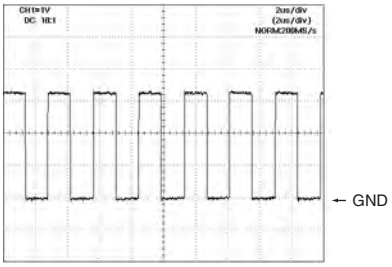
⑬ IC201-pin210 [ABCK]
V: 2V/div. H: 500nsec/div.

⑭ IC201-pin197 [ASDATA0]
V: 2V/div. H: 500sec/div.

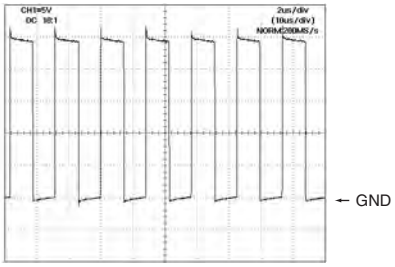


C HAMP ASSY

① IC3201, IC3301, IC3401 [PWM_M, PWM_P]
V: 1V/div. H: 2µsec/div.



② IC3201, IC3301, IC3401 [OUT_A, B, C, D]
V: 5V/div. H: 2µsec/div.



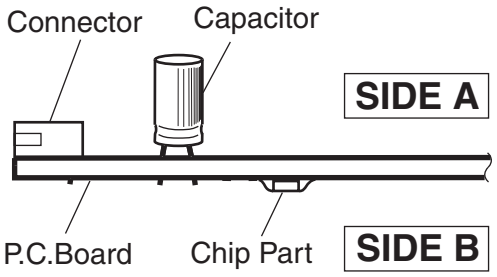
11. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

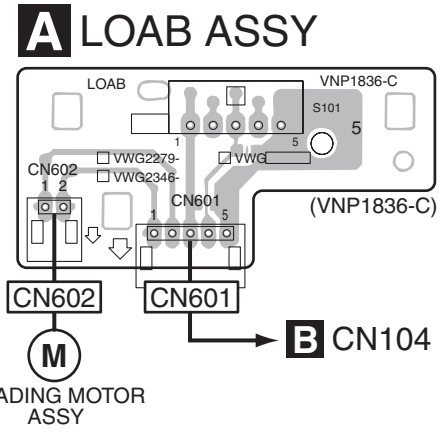
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

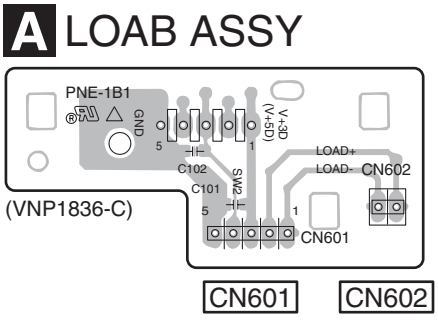


11.1 LOAB ASSY

SIDE A



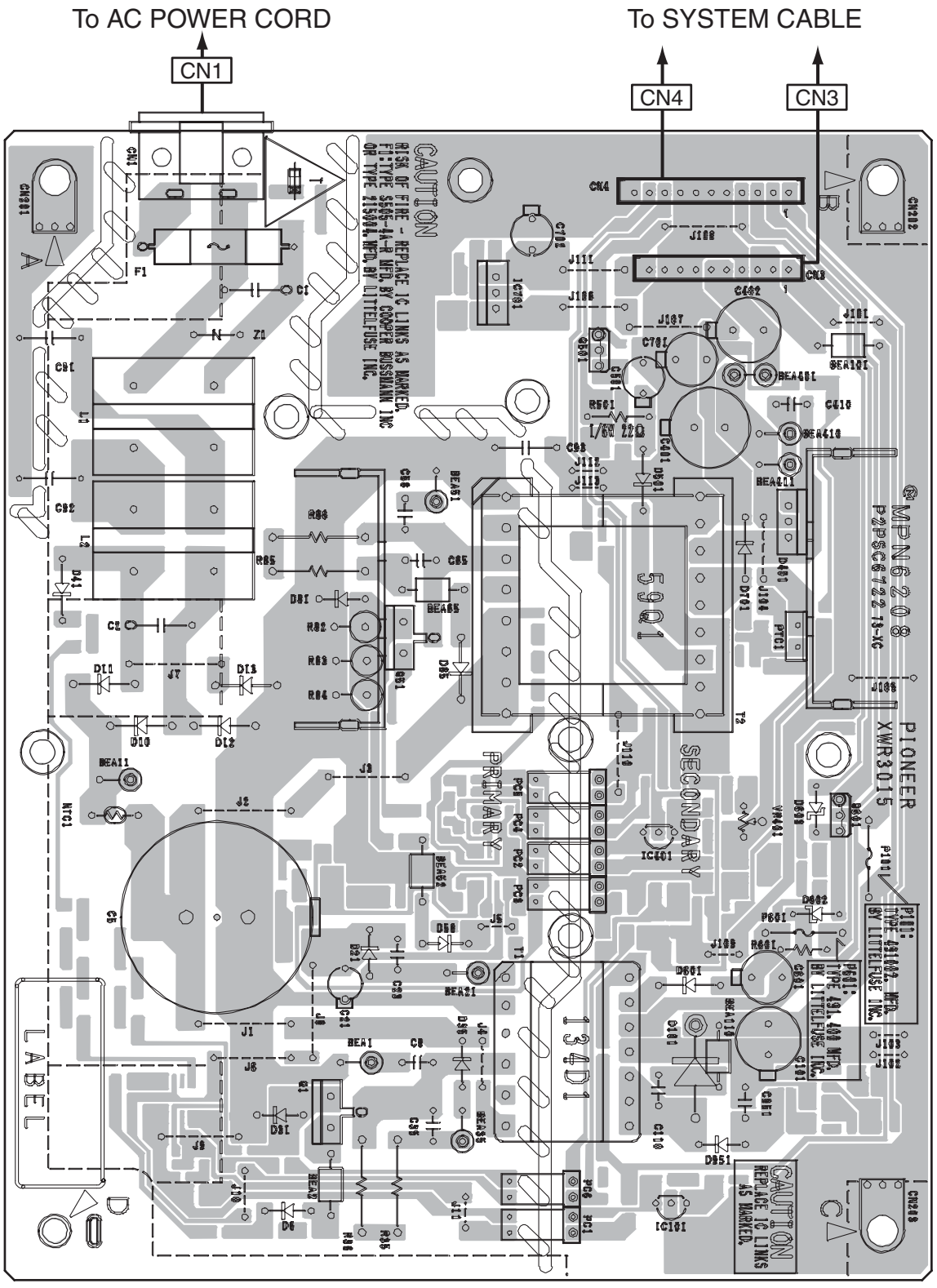
SIDE B



11.2 POWER SUPPLY UNIT

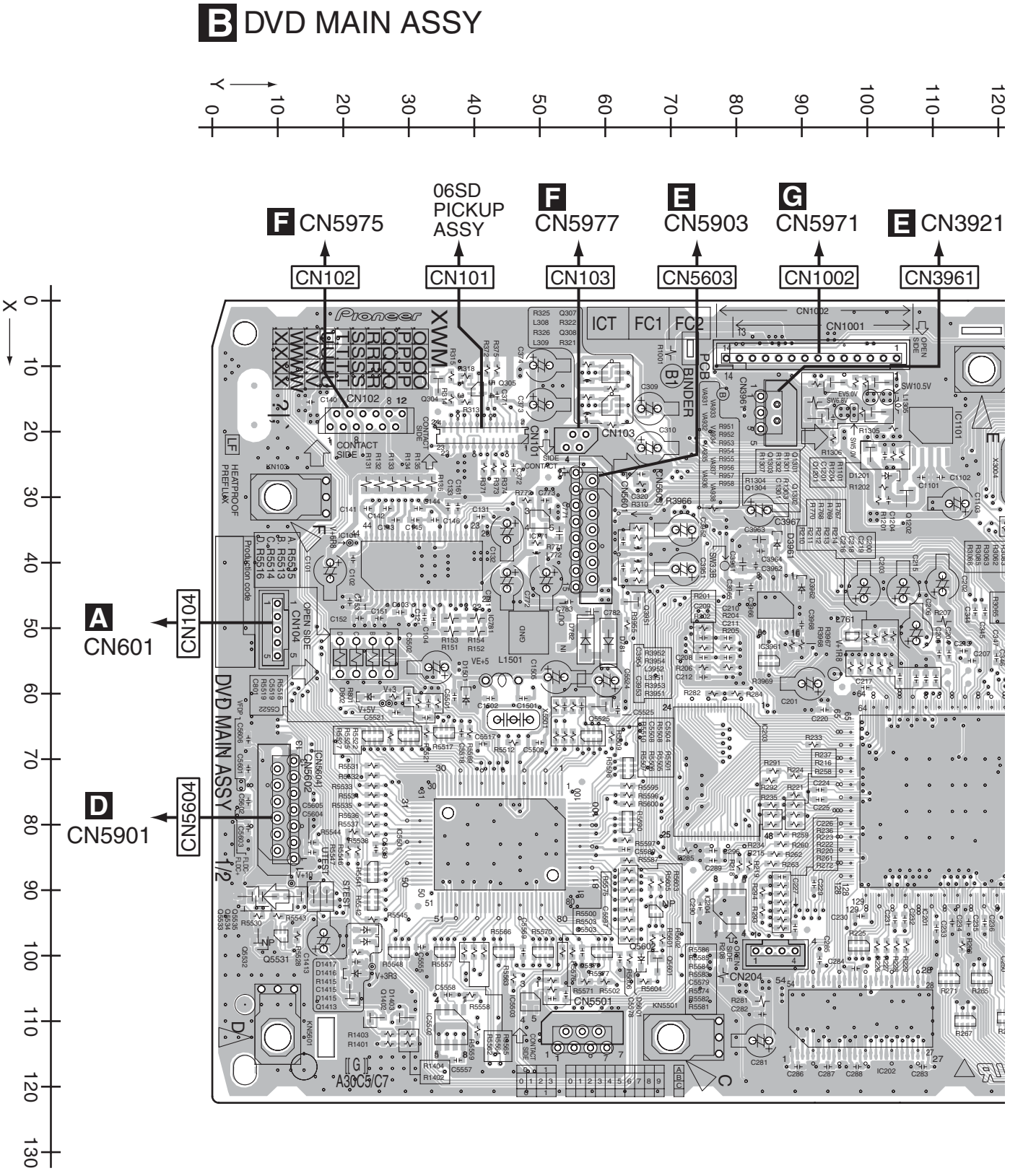
SIDE A **SIDE A**

H POWER SUPPLY UNIT



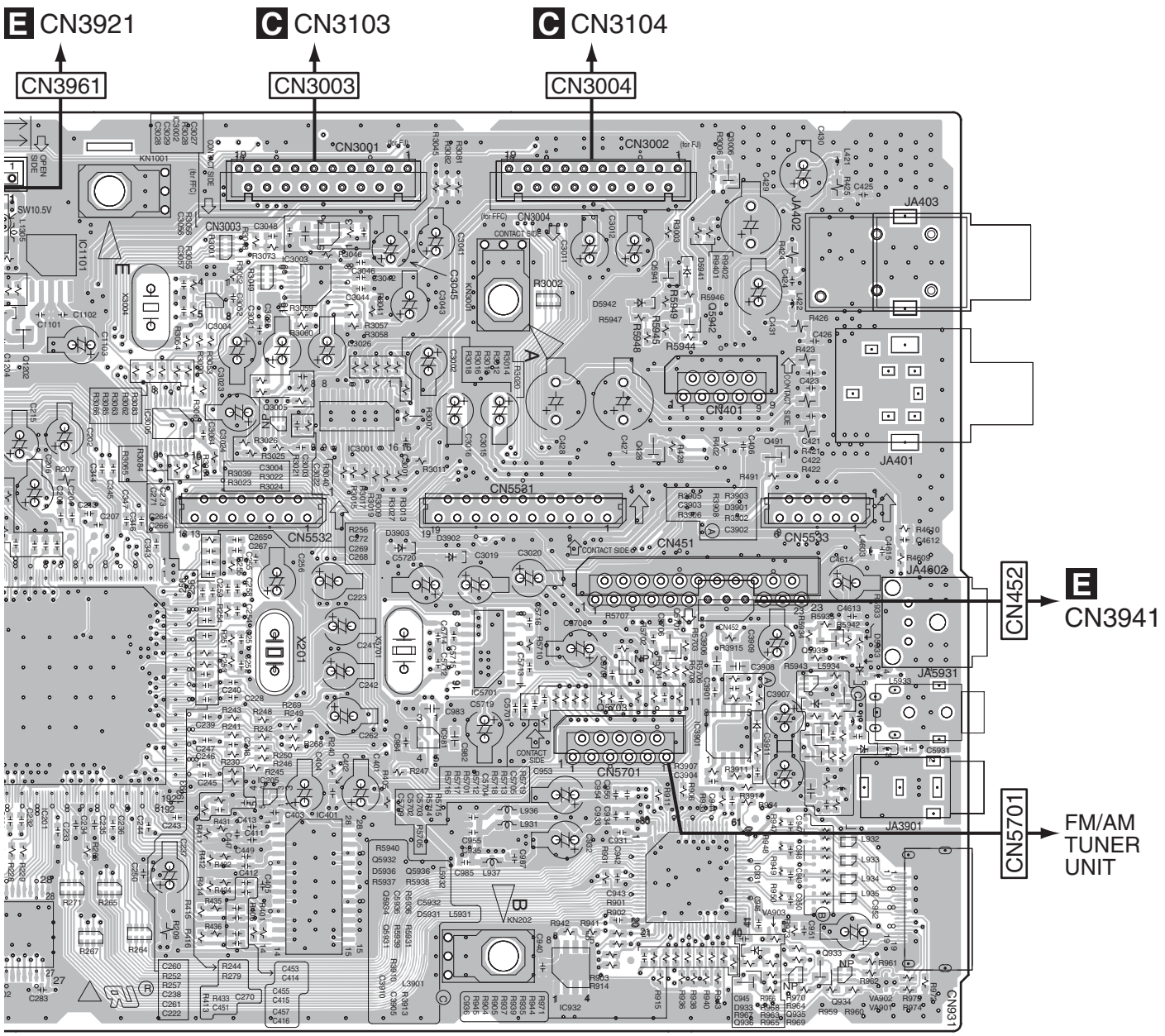
11.3 DVD MAIN ASSY

SIDE A



SIDE A

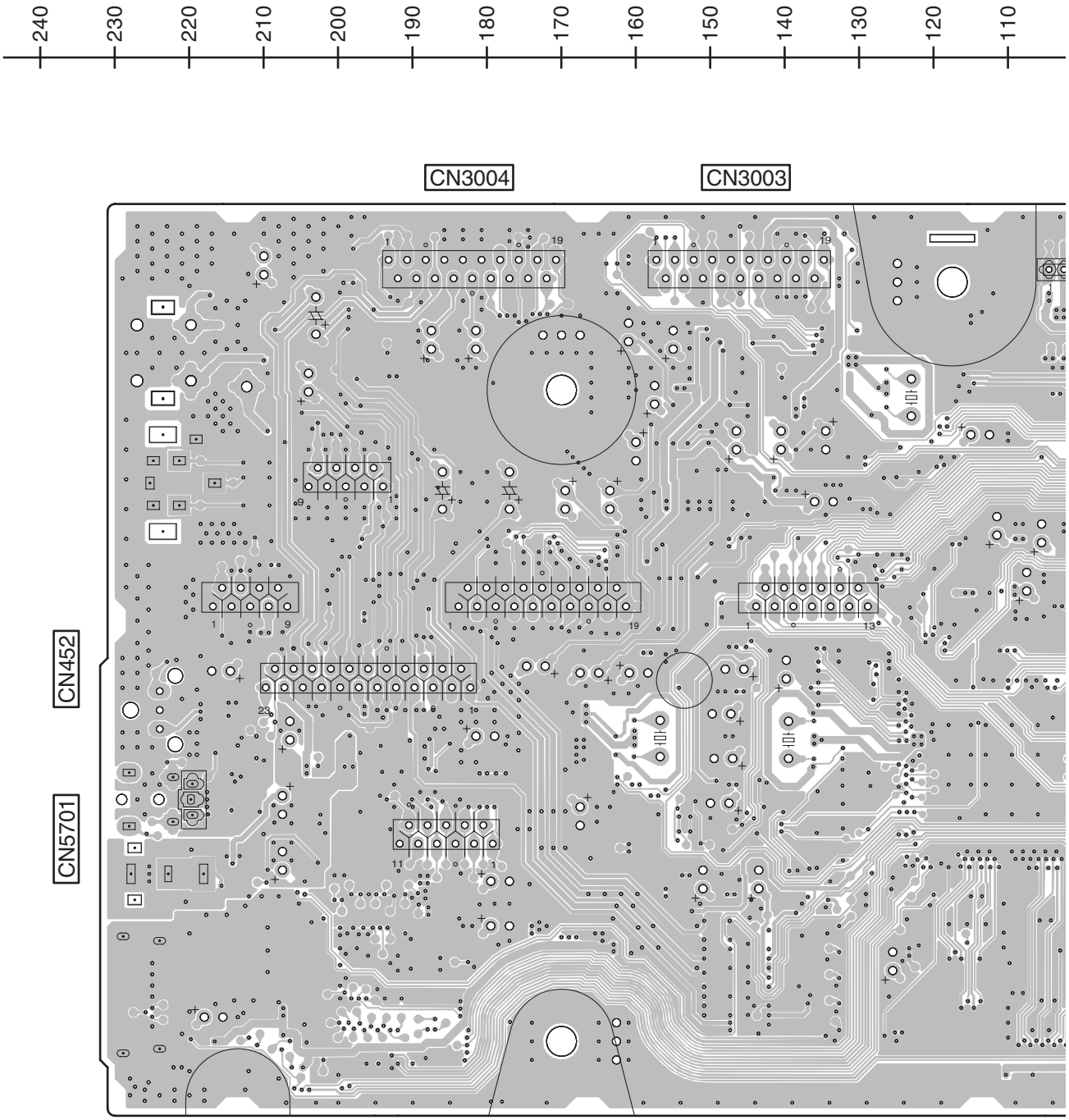
110 120 130 140 150 160 170 180 190 200 210 220 230 240



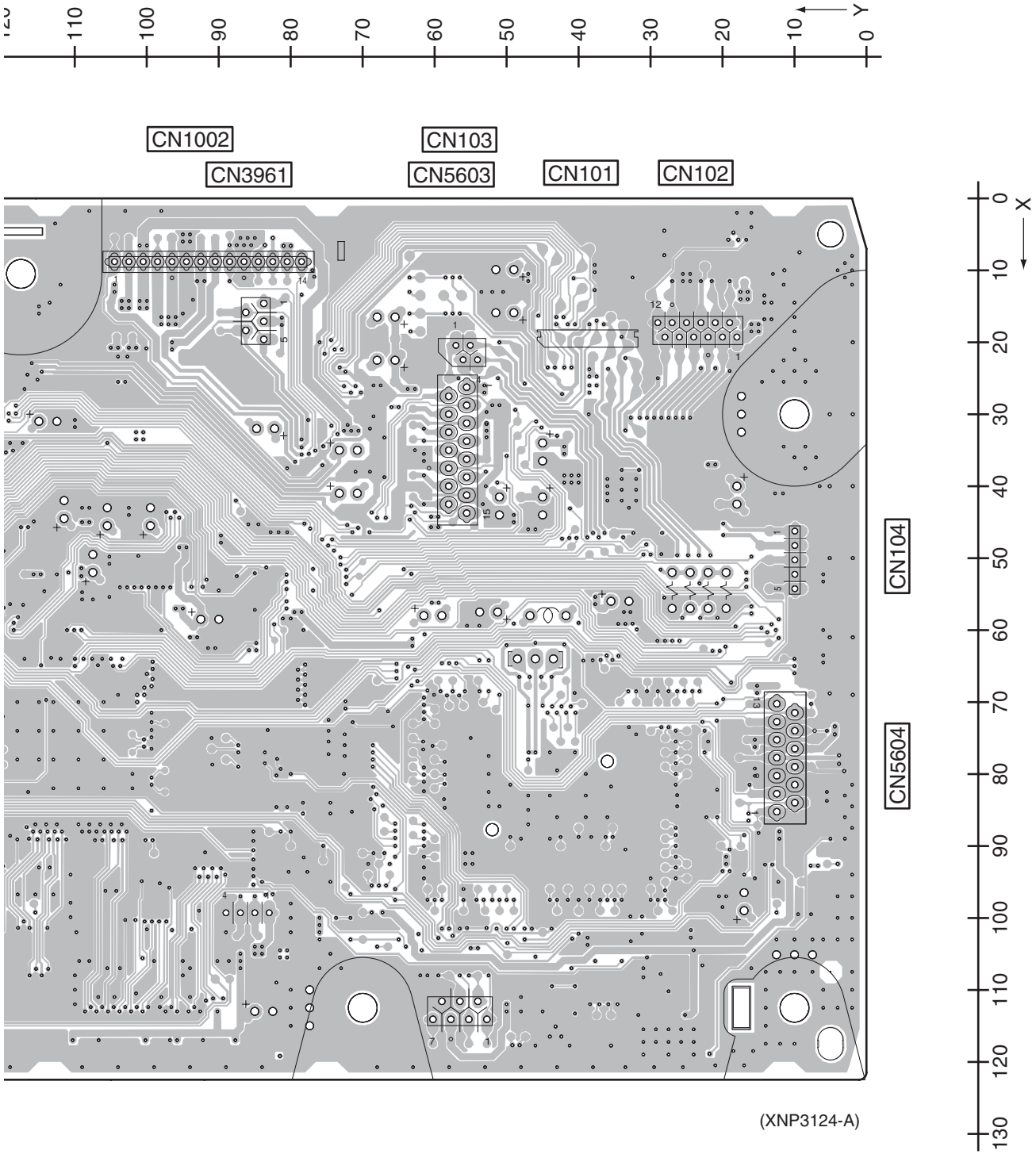
(XNP3124-A)

SIDE B

B DVD MAIN ASSY



SIDE B

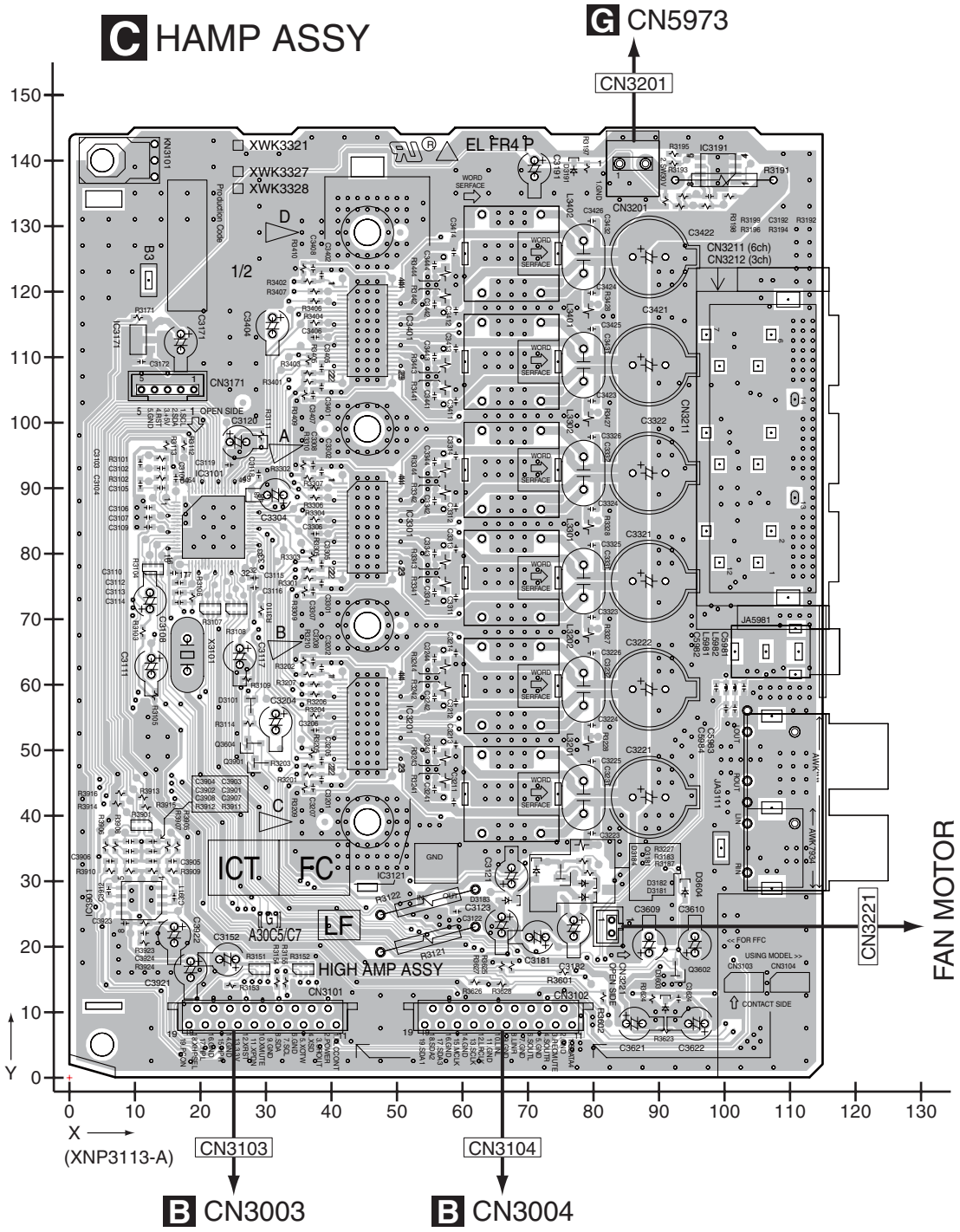


(XNP3124-A)

11.4 HAMP ASSY

SIDE A

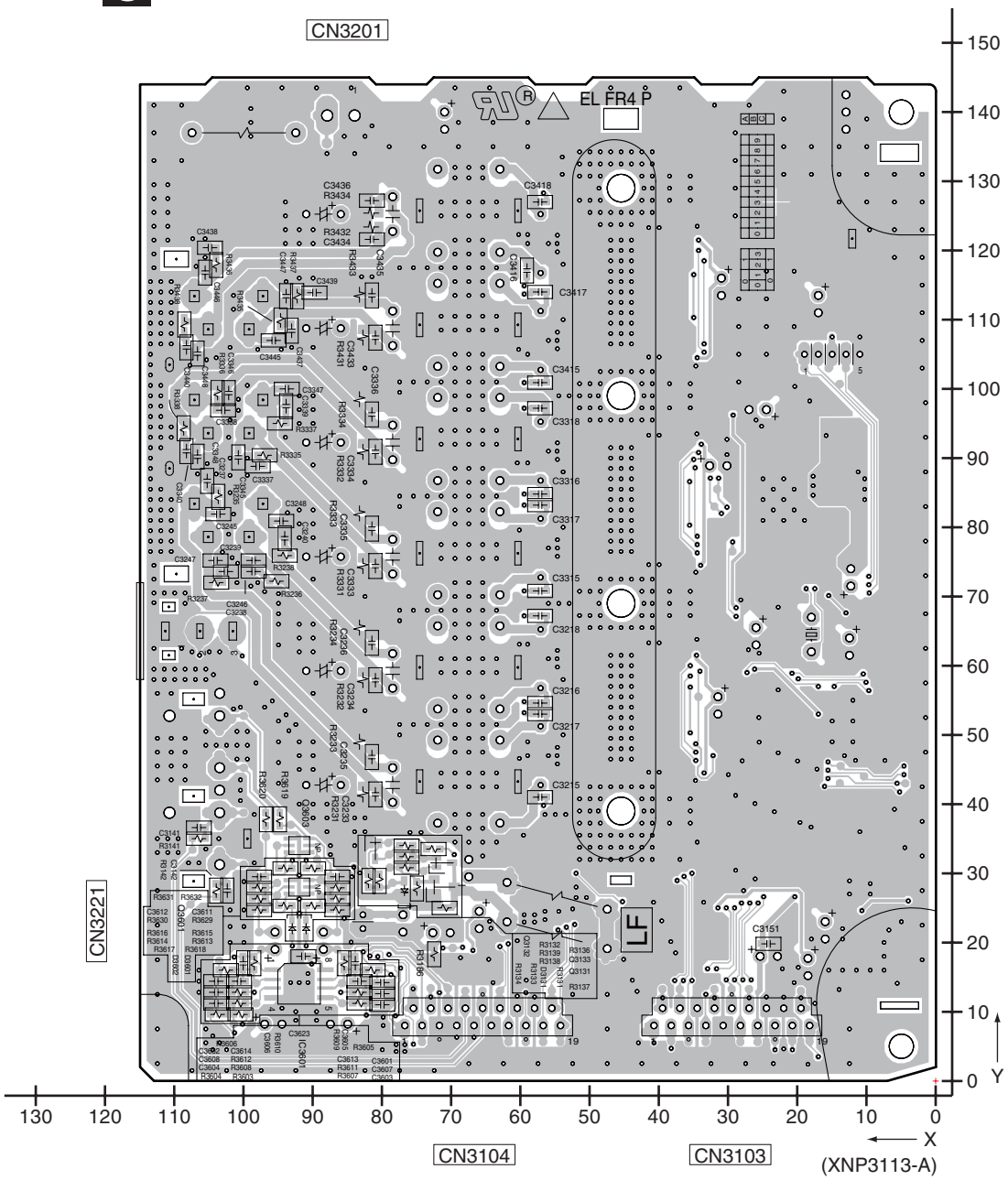
SIDE A



SIDE B

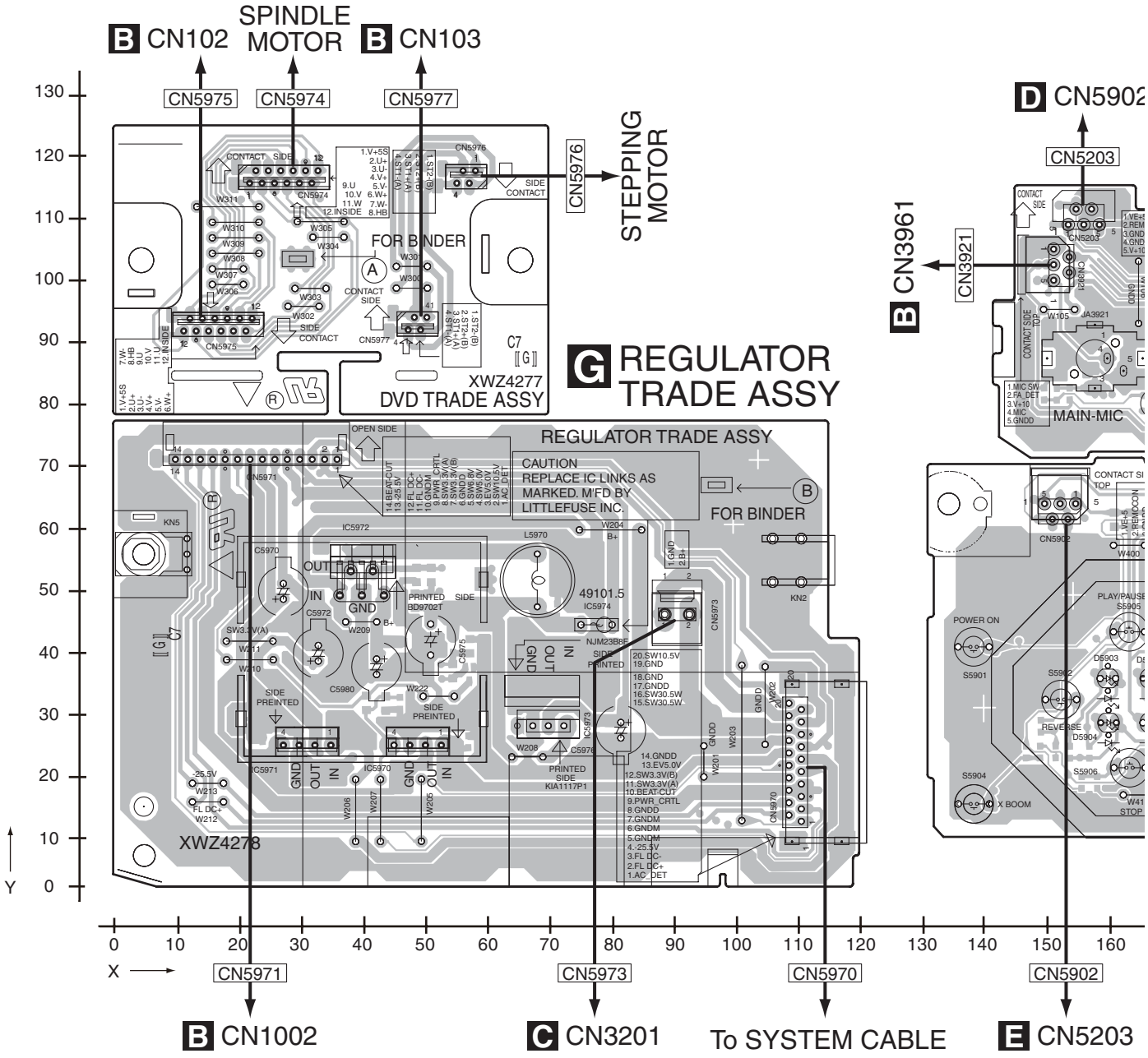
SIDE B

C HAMP ASSY

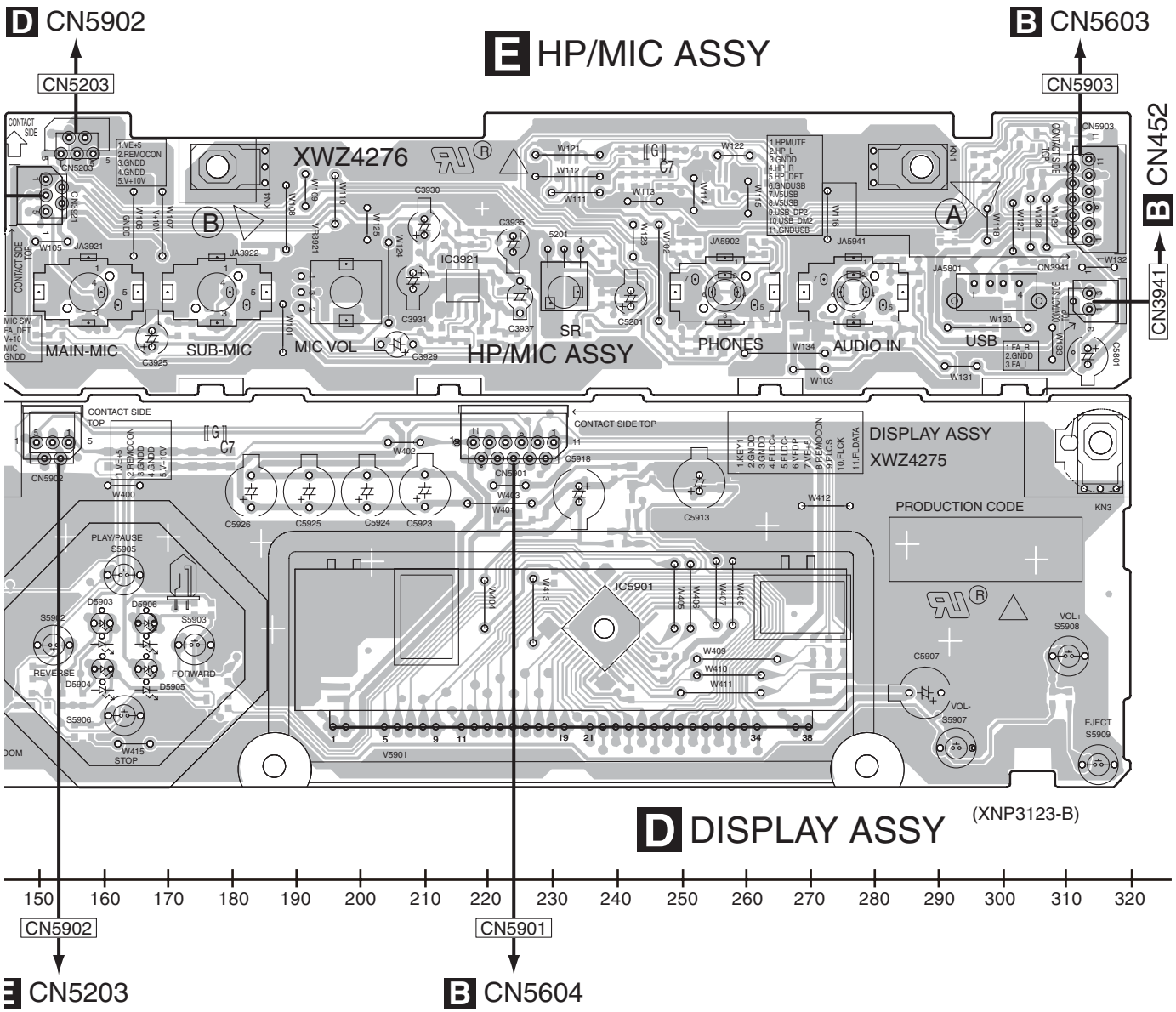


11.5 DISPLAY, HP/MIC, DVD TRADE and REGULATOR TRADE ASSYS

SIDE A

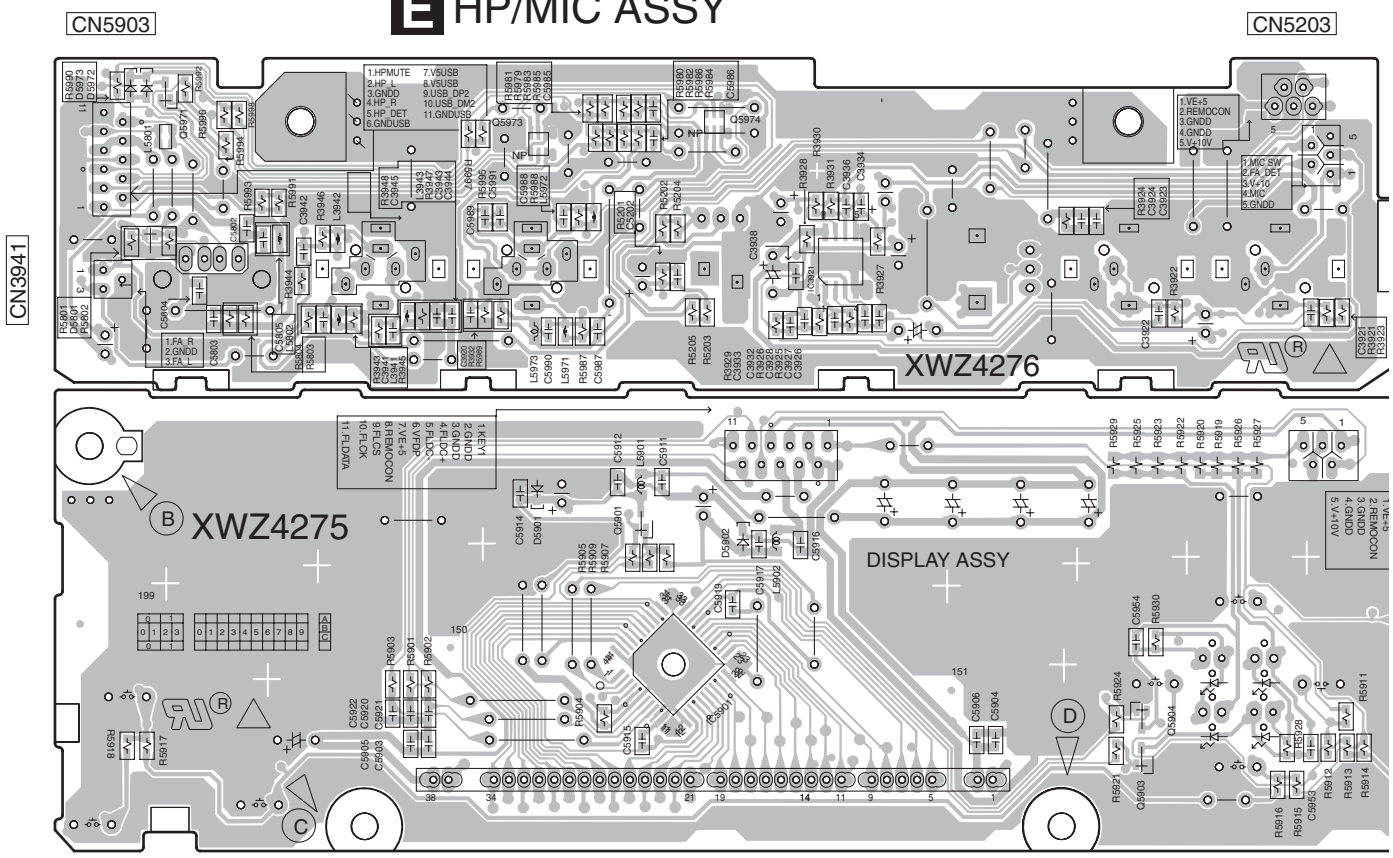


D E F G


D CN5902
E HP/MIC ASSY
B CN5603
CN5203
CN5903
B CN452
CN3941
XWZ4276
MAIN-MIC
SUB-MIC
MIC VOL
HP/MIC ASSY
PHONES
AUDIO IN
USB
SR
IC3921
DISPLAY ASSY
XWZ4275
PRODUCTION CODE
PLAY/PAUSE
S5905
REVERSE
FORWARD
STOP
VOL+
S5908
VOL-
S5907
EJECT
S5909
IC5901
D DISPLAY ASSY
(XNP3123-B)
CN5902
CN5901
E CN5203
B CN5604

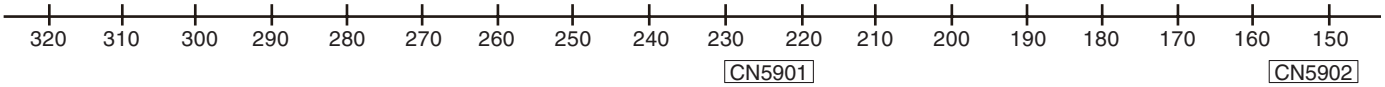
SIDE B

E HP/MIC ASSY



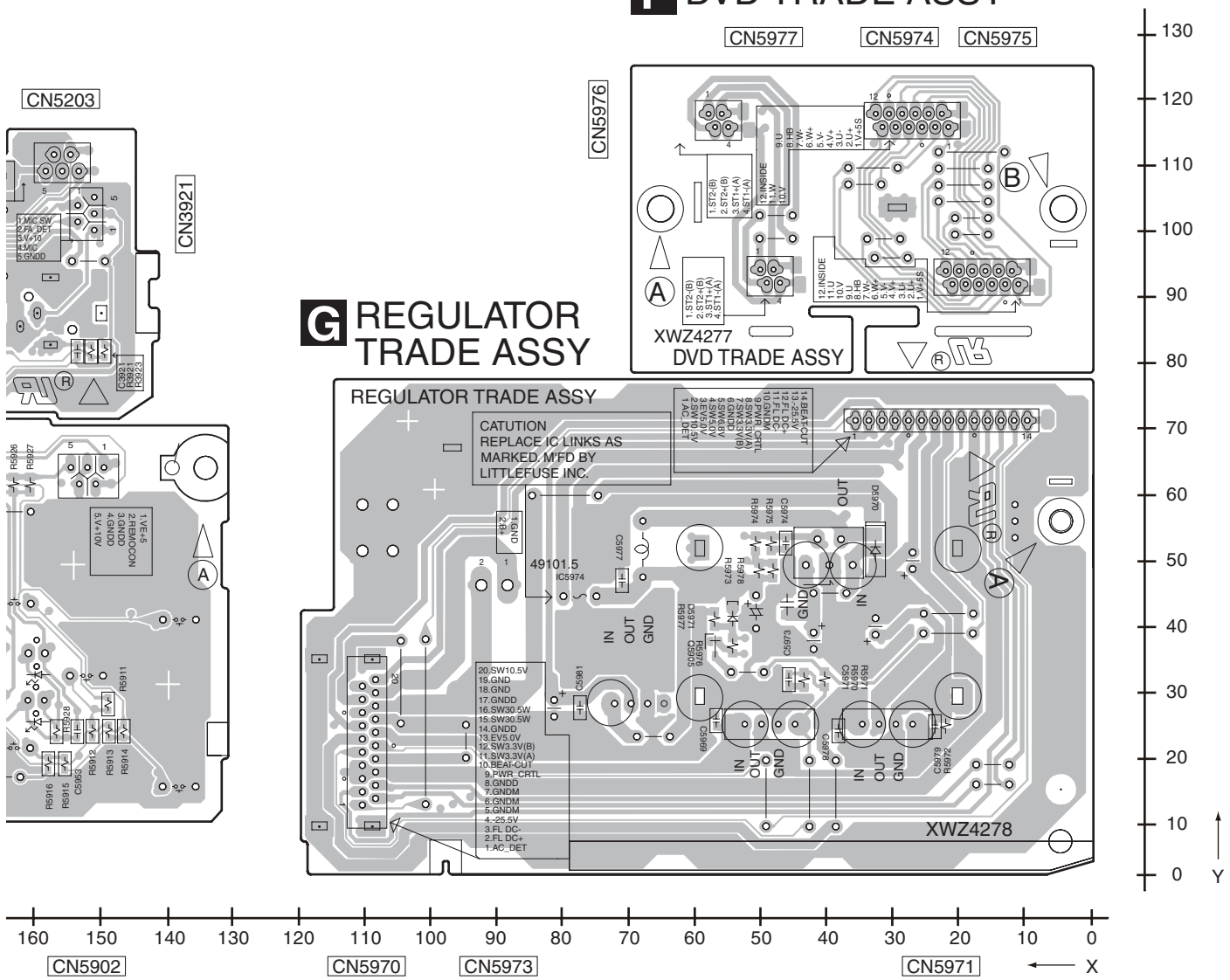
(XNP3123-B)

D DISPLAY ASSY



D E

F DVD TRADE ASSY



12. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10[1]* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10[3]* →	*473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→ *R50*		*RN2H R 5 0 K*
1 Ω	→ *1R0*		*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10[1]* →	*5621*	*RN1/4PC 5 6 2 1 F*

- *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	LOAB ASSY	VWG2346
	1	HAMP ASSY	XWK3327
	1	DVD MAIN ASSY (GFXJ)	XWM3386
	1	DVD MAIN ASSY (NAXJ5)	XWM3381
	1	DVD MAIN ASSY (NTXJ)	XWM3380
	1	DVD MAIN ASSY (TDXJ/RB)	XWM3379
	1	DVD MAIN ASSY (WLXJ, GXJ/RDDF)	XWM3378
NSP	1	COMPLEX ASSY	XWM3377
	2	DISPLAY ASSY	XWZ4275
	2	HP/MIC ASSY	XWZ4276
	2	DVD TRADE ASSY	XWZ4277
	2	REGULATOR TRADE ASSY	XWZ4278
⚠	1	POWER SUPPLY UNIT	XWR3015
	1	FM/AM TUNER UNIT	AXX7251

CONTRAST OF PCB ASSEMBLIES

B DVD MAIN ASSY

XWM3381, XWM3380, XWM3379, XWM3378 and XWM3386 are constructed the same except for the following :

Mark	Symbol and Description	XWM3386	XWM3381	XWM3380	XWM3379	XWM3378
	R5513	Not used	RD1/4PU393J	RD1/4PU103J	RD1/4PU393J	RD1/4PU103J
	R5515	RD1/4PU103J	RD1/4PU103J	RD1/4PU103J	RD1/4PU683J	Not used

PCB PARTS LIST

Mark	No.	Description	Part No.
		A LOAB ASSY	
		MISCELLANEOUS	
	S 101		VSK1011
	CN 602	CONNECTOR	S2B-PH-K
	CN 601	CONNECTOR	S5B-PH-K
		B DVD MAIN ASSY	
		MISCELLANEOUS	
	IC 101	(A,41,32) 6CH DRIVER IC	BD7995EFS
	IC 201	(A,77,112) DVD IC	MT1389FE/H-L
	IC 202	(A,110,99) IC	K4S641632K-UC75
	IC 203	(A,72,77) FLASH ROM	AYW7183
		FLASH MEMORY IC	S29AL016D70TFI010
	IC 204	(A,93,79) EEPROM	S-24CS64A0I
	IC 401	(A,103,145) DVD VIDEO AMP IC	MM1758XF
	IC 771	(A,34,50) LOAD SWITCHING	AAT4618IGV-0.5-1
⚠	IC 781	(A,51,49) REGULATOR IC	NJM2845DL1-05
⚠	IC 1101	(A,20,110) REGULATOR IC	NJM2846DL3-18
	IC 3001	(A,41,151) IC	TC4052BFN
	IC 3003	(A,23,145) AD CONVERTER IC	AK5358AET
	IC 3004	(A,25,132) IC	TC7WU04FU
	IC 3005	(A,42,126) IC	TC74VHC157FTS1
	IC 3961	(A,47,86) AD CONVERTER IC	AK5358AET
	IC 5501	(A,83,44) CPU	PDC159B
	IC 5502	(A,111,37) EEPROM	S-93C46BD0I-J8T1
	Q 304	(A,13,35) TRANSISTOR	2SC4154
	Q 305	(A,14,41) NMOS FET TRANSISTOR	UM5K1N
	Q 307	(A,11,61) CHIP TRANSISTOR	HN1A01F
	Q 308	(A,16,61) CHIP TRANSISTOR	HN1A01F
	Q 1201	(A,24,101) TRANSISTOR	RT1N141M-11
	Q 1202	(A,30,106) CHIP TRANSISTOR	RSR015P03
	Q 1301	(A,13,102) TRANSISTOR(SC-70)	2SA1602A
⚠	Q 1302	(A,17,102) TRANSISTOR	2SA1577
	Q 1303	(A,13,96) TRANSISTOR	2SC4154

Mark	No.		Description	Part No.
Q	1304	(A,18,92)	TRANSISTOR	2SC4154
Q	1402	(A,110,25)	TRANSISTOR(SC-70)	2SA1602A
Q	1413	(A,106,21)	TRANSISTOR	RT1N241M
Q	3005	(A,42,140)	CHIP TRANSISTOR	HN1A01FU
Q	3006	(A,8,200)	TRANSISTOR	RT1N241M
Q	3951	(A,46,64)	TRANSISTOR	RT1N241M
Q	5525	(A,62,59)	DIGITAL TR(SC-70)	RT1N431M
Q	5601	(A,102,68)	TRANSISTOR(SC-70)	2SA1602A
Q	5602	(A,93,68)	CHIP TRANSISTOR	HN1C01FU
Q	5703	(A,74,187)	CHIP TRANSISTOR	HN1C01FU
D	802	(A,61,24)	DIODE	1SS352
D	1201	(A,27,103)	DIODE	1SS352
D	1403	(A,110,30)	DIODE	MC2846-11
D	1415	(A,103,22)	DIODE	UDZS4R7(B)
D	3961	(A,37,86)	DIODE	UDZS3R9(B)
D	3962	(A,44,90)	DIODE	UDZS3R9(B)
D	5601	(A,101,66)	DIODE	1SS352
L	421	(A,7,215)	INDUCTOR	CTF1389
L	422	(A,26,209)	INDUCTOR	CTF1389
L	761	(A,51,98)	COIL	VTH1047
L	772	(A,39,50)	CHIP SOLID INDUCTOR	ATL7002
L	1305	(A,16,105)	INDUCTOR	CTF1395
L	1501	(A,58,42)	AXIAL INDUCTOR	LAU220J
L	3951	(A,40,65)	INDUCTOR	CTF1346
L	3952	(A,38,65)	INDUCTOR	CTF1346
JA	401	(A,38,232)	JACK	VKB1178
JA	402	(A,20,232)	JACK	XKB3061
X	201	(A,75,140)	CRYSTAL RESONATOR (27 MHz)	VSS1168
X	3004	(A,24,123)	CRYSTAL RESONATOR	VSS1140
X	5501	(A,64,44)	CERAMIC RESONATOR (10 MHz)	ASS7034
CN	101	(A,21,41)	CONNECTOR	VKN2045
CN	102	(A,19,18)	12P CONNECTOR	VKN1243
CN	103	(A,20,57)	4P CONNECTOR	VKN1235
CN	104	(A,46,10)	CONNECTOR POST	B5B-PH
CN	452		CONNECTOR	CKS3368
CN	1002	(A,9,105)	CONNECTOR(KR)	B14B-PH
CN	3003		CONNECTOR	CKS3384
CN	3004		CONNECTOR	CKS3384
CN	3961	(A,15,84)	CONNECTOR	CKS3370
CN	5603		CONNECTOR	CKS3376
CN	5604		CONNECTOR	CKS3376
CN	5701	(A,86,179)	CONNECTOR	CKS3376
	2		PCB BINDER	VEF1040

RESISTORS

R	131	(A,28,24)		RS1/10S4R7J
R	132	(A,28,26)		RS1/10S4R7J
R	133	(A,28,28)		RS1/10S4R7J
R	134	(A,28,30)		RS1/10S4R7J
R	135	(A,28,32)		RS1/10S4R7J
R	136	(A,28,34)		RS1/10S4R7J
R	151	(A,51,37)		RS1/10S1R0J
R	152	(A,51,41)		RS1/10S1R8J
R	153	(A,49,37)		RS1/10S1R0J
R	154	(A,49,41)		RS1/10S1R8J
R	201	(A,50,75)		RS1/16S152J
R	202	(A,53,75)		RS1/16S223J
R	204	(A,53,79)		RS1/16S223J
R	205	(A,56,79)		RS1/16S513J
R	206	(A,56,75)		RS1/16S513J
R	212	(A,56,101)		RS1/16S103J
R	213	(A,56,102)		RS1/16S103J
R	215	(A,80,86)		RS1/16S332J
R	216	(A,79,89)		RS1/16S472J
R	218	(A,86,81)		RS1/16S103J
R	219	(A,86,82)		RS1/16S103J
R	221	(A,76,89)		RS1/16S330J
R	223	(A,91,87)		RS1/16S330J
R	224	(A,73,89)		RS1/16S330J
R	225	(A,99,99)	CHIP RESISTOR ARRAY	RAB4C330J
R	226	(A,99,102)		RS1/16S0R0J
R	227	(A,99,103)		RS1/16S330J
R	228	(A,99,105)		RS1/16S330J
R	229	(A,99,106)		RS1/16S330J
R	230	(A,86,134)		RS1/16S103J
R	233	(A,68,92)		RS1/16S0R0J
R	234	(A,79,86)		RS1/16S330J
R	235	(A,77,86)		RS1/16S472J
R	237	(A,77,89)		RS1/16S330J
R	241	(A,83,134)		RS1/16S330J
R	242	(A,83,138)		RS1/16S330J
R	243	(A,81,134)		RS1/16S100J
R	244	(A,88,134)		RS1/16S330J
R	245	(A,87,137)		RS1/16S330J
R	246	(A,86,138)		RS1/16S330J
R	249	(A,83,142)		RS1/16S330J
R	251	(A,70,134)		RS1/16S104J
R	252	(A,72,130)		RS1/16S0R0J
R	253	(A,73,134)		RS1/16S681J
R	254	(A,67,133)		RS1/16S754J
R	255	(A,61,134)		RS1/16S104J
R	256	(A,57,131)		RS1/16S153J
R	258	(A,80,89)		RS1/16S330J
R	259	(A,82,87)		RS1/16S330J
R	260	(A,83,87)		RS1/16S330J
R	261	(A,95,87)		RS1/16S330J
R	269	(A,82,142)		RS1/16S0R0J
R	272	(A,96,87)		RS1/16S333J
R	279	(A,89,134)	CHIP RESISTOR	RS1/16S2201F
R	281	(A,107,84)		RS1/10S0R0J
R	284	(A,60,80)		RS1/16S103J
R	291	(A,72,86)		RS1/16S332J
R	292	(A,73,85)		RS1/16S682J
R	293	(A,93,84)		RS1/16S332J
R	294	(A,90,84)		RS1/16S682J
R	313	(A,16,39)		RS1/16S104J
R	314	(A,15,37)		RS1/16S103J
R	315	(A,12,37)		RS1/16S103J
R	318	(A,12,39)		RS1/16S104J
R	321	(A,19,61)		RS1/16S4R7J
R	322	(A,14,61)		RS1/16S4R7J
R	325	(A,10,57)		RS1/16S4R7J
R	326	(A,15,57)		RS1/16S4R7J
R	402	(A,45,200)		RS1/16S103J
R	406	(A,109,137)		RS1/16S103J
R	411	(A,96,131)		RS1/16S1500F
R	412	(A,100,131)		RS1/16S1500F
R	413	(A,93,130)		RS1/16S1500F

Mark	No.	Description	Part No.
R	414	(A,103,131)	RS1/16S1500F
R	415	(A,107,130)	RS1/16S1500F
R	416	(A,110,130)	RS1/16S1500F
R	421	(A,39,211)	RS1/10S75R0F
R	422	(A,43,211)	RS1/10S75R0F
R	423	(A,33,211)	RS1/10S75R0F
R	424	(A,19,209)	RS1/10S75R0F
R	425	(A,10,215)	RS1/10S75R0F
R	426	(A,29,210)	RS1/10S75R0F
R	767	(A,51,104)	RS1/16S153J
R	768	(A,52,101)	RS1/16S153J
R	769	(A,51,103)	RS1/16S330J
R	770	(A,52,100)	RS1/16S330J
R	771	(A,37,50)	RS1/16S221J
R	772	(A,31,48)	RS1/16S104J
R	801	(A,61,28)	RS1/16S472J
R	1101	(A,24,105)	RS1/16S221J
R	1201	(A,31,102)	RS1/16S103J
R	1202	(A,29,103)	RS1/16S474J
R	1301	(A,13,100)	RS1/16S473J
R	1302	(A,13,98)	RS1/16S392J
R	1303	(A,17,99)	RS1/16S473J
R	1304	(A,16,92)	RS1/10S561J
R	1306	(A,21,95)	RS1/16S103J
R	1307	(A,13,92)	RS1/16S472J
R	1401	(A,114,27)	RS1/16S392J
R	1402	(A,114,30)	RS1/16S332J
R	1403	(A,112,27)	RS1/16S473J
R	1404	(A,112,30)	RS1/16S393J
R	1415	(A,100,22)	RS1/16S182J
R	3006	(A,8,198)	RS1/16S103J
R	3009	(A,49,153)	RS1/16S102J
R	3010	(A,34,153)	RS1/16S102J
R	3011	(A,47,159)	RS1/16S223J
R	3012	(A,34,155)	RS1/16S223J
R	3013	(A,49,156)	RS1/16S223J
R	3014	(A,34,156)	RS1/16S223J
R	3015	(A,48,149)	RS1/16S223J
R	3016	(A,34,152)	RS1/16S223J
R	3017	(A,48,150)	RS1/16S223J
R	3018	(A,34,150)	RS1/16S223J
R	3019	(A,48,152)	RS1/16S473J
R	3020	(A,37,157)	RS1/16S473J
R	3021	(A,45,140)	RS1/16S224J
R	3022	(A,37,143)	RS1/16S224J
R	3023	(A,37,138)	RS1/16S102J
R	3024	(A,39,143)	RS1/16S102J
R	3025	(A,45,136)	RS1/16S102J
R	3026	(A,44,136)	RS1/16S102J
R	3027	(A,49,155)	RS1/16S473J
R	3039	(A,36,138)	RS1/16S153J
R	3040	(A,42,144)	RS1/16S153J
R	3048	(A,17,137)	RS1/16S182J
R	3049	(A,22,139)	RAB4C101J
R	3052	(A,22,134)	RS1/16S0R0J
R	3053	(A,31,131)	RS1/16S101J
R	3054	(A,31,128)	RS1/16S101J
R	3055	(A,27,129)	RS1/16S105J
R	3056	(A,23,129)	RS1/16S101J
R	3057	(A,27,150)	RS1/16S0R0J

Mark	No.	Description	Part No.
R	3060	(A,29,143)	RS1/16S0R0J
R	3061	(A,37,130)	RS1/16S221J
R	3062	(A,35,127)	RS1/16S221J
R	3063	(A,35,125)	RS1/16S221J
R	3065	(A,48,127)	RS1/16S221J
R	3066	(A,35,121)	RS1/16S0R0J
R	3073	(A,18,139)	RS1/16S332J
R	3081	(A,10,164)	RS1/16S105J
R	3082	(A,10,163)	RS1/16S105J
R	3915	(A,70,200)	RS1/16S473J
R	3951	(A,43,65)	RS1/16S473J
R	3952	(A,35,65)	RS1/16S473J
R	3955	(A,50,63)	RS1/16S182J
R	3966	(A,32,77)	RS1/16S102J
R	3967	(A,53,90)	RS1/16S332J
R	3968	(A,53,89)	RS1/16S182J
R	3969	(A,55,85)	RAB4C101J
R	5501	(A,67,58)	RAB4C221J
R	5502	(A,104,60)	RS1/16S104J
R	5505	(A,67,55)	RS1/16S221J
R	5507	(A,67,53)	RS1/16S221J
R	5508	(A,62,55)	RS1/16S222J
R	5509	(A,67,61)	RS1/16S0R0J
R	5510	(A,62,53)	RS1/16S473J
R	5515	(A,52,27)	RD1/4PU103J
R	5516	(A,52,20)	RD1/4PU473J
R	5517	(A,66,35)	RAB4C221J
R	5518	(A,62,35)	RS1/16S105J
R	5519	(A,62,32)	RS1/16S103J
R	5521	(A,66,33)	RS1/16S221J
R	5527	(A,67,25)	RAB4C221J
R	5531	(A,71,25)	RS1/16S0R0J
R	5541	(A,87,25)	RAB4C221J
R	5543	(A,94,10)	RS1/16S0R0J
R	5544	(A,81,22)	RS1/16S0R0J
R	5546	(A,84,22)	RS1/16S103J
R	5547	(A,84,21)	RS1/16S103J
R	5548	(A,100,29)	RAB4C221J
R	5557	(A,100,36)	RAB4C221J
R	5558	(A,106,40)	RS1/16S473J
R	5559	(A,112,41)	RS1/16S473J
R	5562	(A,100,39)	RS1/16S221J
R	5563	(A,104,46)	RS1/16S103J
R	5566	(A,100,45)	RAB4C221J
R	5569	(A,66,39)	RS1/16S221J
R	5570	(A,100,51)	RAB4C221J
R	5571	(A,104,57)	RS1/16S102J
R	5574	(A,95,64)	RS1/16S104J
R	5577	(A,100,60)	RAB4C221J
R	5581	(A,98,64)	RS1/16S221J
R	5582	(A,96,64)	RS1/16S221J
R	5583	(A,92,64)	RS1/16S103J
R	5584	(A,90,64)	RS1/16S221J
R	5596	(A,76,64)	RS1/16S220J
R	5597	(A,82,63)	RS1/16S153J
R	5601	(A,98,67)	RS1/16S223J
R	5602	(A,98,69)	RS1/16S223J
R	5603	(A,89,69)	RS1/16S223J
R	5604	(A,104,66)	RS1/16S151J
R	5605	(A,89,67)	RS1/16S102J

Mark	No.		Description	Part No.
R	5606	(A,101,64)		RS1/16S223J
R	5712	(A,78,184)		RS1/16S0R0J
R	5713	(A,78,190)		RS1/16S0R0J
R	5943	(A,73,212)		RS1/16S0R0J
R	9402	(A,16,198)		RS1/16S0R0J

CAPACITORS

C	101	(A,40,18)		CEAT101M10
C	102	(A,40,22)		CKSRYB105K10
C	103	(A,48,29)		CKSRYB105K10
C	104	(A,49,34)		CKSRYB105K10
C	121	(A,48,32)		CKSRYB105K6R3
C	131	(A,33,41)		CKSRYB104K16
C	140	(A,16,15)		CKSRYB105K6R3
C	144	(A,32,32)		CKSRYB222K50
C	145	(A,34,31)		CKSRYB222K50
C	146	(A,34,34)		CKSRYB222K50
C	151	(A,49,26)		CKSRYB103K50
C	152	(A,49,23)		CKSRYB103K50
C	153	(A,46,21)		CKSRYB103K50
C	161	(A,32,38)		CKSRYB102K50
C	200	(A,58,111)		CKSRYB104K16
C	201	(A,59,93)		CEAT221M6R3
C	202	(A,45,112)		CEAT221M6R3
C	203	(A,46,100)	ELECT. CAPACITOR	CEAT470M35
C	204	(A,54,113)		CKSRYB104K16
C	205	(A,54,111)		CKSRYB104K16
C	206	(A,52,108)	ELECT. CAPACITOR	CEAT470M35
C	207	(A,55,116)		CKSRYB104K16
C	208	(A,55,75)		CKSRYB222K50
C	209	(A,52,75)		CKSRYB104K16
C	210	(A,52,79)		CKSRYB222K50
C	211	(A,55,79)		CCSRCH101J50
C	212	(A,58,75)		CCSRCH101J50
C	213	(A,54,115)		CKSRYB104K16
C	215	(A,46,106)	ELECT. CAPACITOR	CEAT470M35
C	216	(A,58,105)		CKSRYB104K16
C	217	(A,59,100)		CKSRYB104K16
C	218	(A,58,108)		CKSRYB104K16
C	219	(A,58,109)		CKSRYB562K50
C	220	(A,63,94)		CKSRYB104K16
C	223	(A,63,146)		CEAT100M50
C	224	(A,75,93)		CKSRYB104K16
C	225	(A,76,93)		CKSRYB104K16
C	226	(A,88,87)		CKSRYB103K50
C	227	(A,96,89)		CCSRCH221J50
C	228	(A,78,134)		CKSRYB104K16
C	229	(A,89,92)		CKSRYB104K16
C	230	(A,94,99)		CKSRYB104K16
C	231	(A,95,104)		CKSRYB104K16
C	232	(A,95,106)		CKSRYB104K16
C	233	(A,96,111)		CKSRYB104K16
C	234	(A,95,113)		CKSRYB104K16
C	235	(A,95,116)		CKSRYB104K16
C	236	(A,95,118)		CKSRYB104K16
C	237	(A,103,126)		CEAT221M6R3
C	238	(A,75,130)		CKSRYB104K16
C	239	(A,81,131)		CKSRYB104K16
C	241	(A,69,147)		CEAT100M50
C	242	(A,75,147)		CEAT100M50
C	243	(A,94,127)		CKSRYB104K16
C	244	(A,95,123)		CKSRYB104K16
C	245	(A,88,131)		CKSRYB105K6R3
C	246	(A,87,130)		CKSRYB104K16
C	247	(A,84,131)		CKSRYB104K16
C	248	(A,84,134)		CKSRYB104K16
C	250	(A,102,122)		CKSRYB104K16
C	251	(A,70,135)		CCSRCH9R0D50
C	252	(A,74,135)		CCSRCH120J50
C	254	(A,67,135)		CKSRYB102K50
C	255	(A,60,137)		CKSRYB474K10
C	256	(A,64,140)		CEAT100M50
C	258	(A,64,135)		CKSRYB473K25
C	259	(A,64,133)		CKSRYB473K25
C	260	(A,70,131)		CKSRYB104K16
C	261	(A,76,131)		CKSRYB104K16
C	262	(A,81,148)		CEAT100M50
C	264	(A,66,131)		CKSRYB104K16
C	265	(A,57,135)		CCSRCH220J50
C	266	(A,68,131)		CKSRYB104K16
C	267	(A,58,135)		CKSRYB102K50
C	268	(A,62,131)		CKSRYB104K16
C	269	(A,60,131)		CKSRYB333K16
C	271	(A,64,130)		CKSRYB104K16
C	272	(A,59,131)		CKSRYB104K16
C	273	(A,64,131)		CKSRYB104K16
C	281	(A,113,85)		CEAT221M6R3
C	282	(A,109,84)		CKSRYB105K6R3
C	283	(A,117,109)		CKSRYB104K16
C	284	(A,102,98)		CKSRYB104K16
C	285	(A,101,93)		CKSRYB104K16
C	286	(A,117,90)		CKSRYB104K16
C	287	(A,117,94)		CKSRYB104K16
C	288	(A,117,99)		CKSRYB104K16
C	289	(A,86,77)		CKSRYB105K6R3
C	290	(A,93,75)		CKSRYB104K16
C	296	(A,84,77)		CKSRYB102K50
C	309	(A,17,66)	ELECT. CAPACITOR	CEAT470M35
C	310	(A,23,66)	ELECT. CAPACITOR	CEAT470M35
C	343	(A,58,124)		CKSRYB105K6R3
C	344	(A,48,117)		CKSRYB105K6R3
C	345	(A,48,118)		CKSRYB105K6R3
C	346	(A,55,122)		CKSRYB105K6R3
C	347	(A,55,120)		CKSRYB105K6R3
C	371	(A,15,44)		CKSRYB104K16
C	372	(A,26,46)		CKSRYB104K16
C	374	(A,10,49)	ELECTR.CAPACITOR	CEAT101M6R3
C	401	(A,92,151)		CEAT101M16
C	402	(A,91,147)		CKSRYB104K16
C	404	(A,92,144)		CEAT101M16
C	405	(A,103,138)		CKSRYB104K16
C	406	(A,45,202)		CKSRYB104K16
C	411	(A,97,137)		CKSRYB104K16
C	412	(A,101,136)		CKSRYB105K6R3
C	413	(A,95,137)		CKSRYB105K6R3
C	414	(A,104,136)		CKSRYB105K6R3
C	415	(A,107,135)		CKSRYB104K16
C	416	(A,111,135)		CKSRYB104K16
C	427	(A,41,186)	ELECT. CAPACITOR	CEAT102M6R3
C	428	(A,41,177)	ELECT. CAPACITOR	CEAT102M6R3

Mark	No.	Description	Part No.
	C 429	(A,18,203) ELECT. CAPACITOR	CEAT102M6R3
	C 430	(A,10,210)	CEAT471M6R3
	C 431	(A,25,204)	CEAT471M6R3
	C 771	(A,36,53)	CKSQYB105K16
	C 773	(A,31,51)	CKSRYB104K16
	C 781	(A,42,45)	CEAT100M50
	C 782	(A,48,58)	CKSQYB225K10
	C 1101	(A,27,108)	CKSRYB105K6R3
	C 1103	(A,31,115) ELECT. CAPACITOR	CEAT470M35
	C 1201	(A,24,103)	CKSRYB105K6R3
	C 1204	(A,31,103)	CKSRYB563K16
	C 1301	(A,18,95)	CKSRYB105K6R3
	C 1501	(A,61,48)	CKSRYB103K50
	C 1502	(A,61,43)	CKSRYB104K16
	C 1505	(A,58,51)	CEAT101M10
	C 3001	(A,44,157)	CKSRYB103K50
	C 3011	(A,20,182)	CEAT100M50
	C 3012	(A,20,188)	CEAT100M50
	C 3015	(A,39,170)	CEAT100M50
	C 3016	(A,39,164)	CEAT100M50
	C 3019	(A,63,165)	CEAT100M50
	C 3020	(A,62,172)	CEAT100M50
	C 3021	(A,29,138)	CKSRYB104K16
	C 3022	(A,42,143)	CKSRYB104K16
	C 3023	(A,31,135) ELECT. CAPACITOR	CEAT470M35
	C 3024	(A,40,136)	CEAT221M6R3
	C 3025	(A,33,141)	CEAT100M50
	C 3026	(A,33,147)	CEAT100M50
	C 3041	(A,19,161)	CEAT100M50
	C 3042	(A,22,151)	CKSRYB104K16
	C 3043	(A,27,158)	CEAT2R2M50
	C 3044	(A,24,151)	CKSRYB104K16
	C 3045	(A,20,155)	CEAT100M50
	C 3046	(A,20,151)	CKSRYB104K16
	C 3048	(A,17,139)	CKSRYB103K50
	C 3052	(A,25,134)	CKSRYB104K16
	C 3056	(A,23,127)	CCSRCH270J50
	C 3057	(A,27,127)	CCSRCH270J50
	C 3064	(A,43,130)	CKSRYB104K16
	C 3951	(A,41,73)	CEAT101M16
	C 3952	(A,35,73)	CEAT101M16
	C 3961	(A,40,81)	CKSRYB105K6R3
	C 3962	(A,41,83)	CKSRYB104K16
	C 3963	(A,37,84)	CKSQYB225K10
	C 3965	(A,44,81)	CKSQYB225K10
	C 3966	(A,44,82)	CKSRYB104K16
	C 3967	(A,32,82) ELECT. CAPACITOR	CEAT220M25
	C 3968	(A,50,90)	CKSRYB103K50
	C 5502	(A,56,36)	CEAT101M10
	C 5504	(A,62,56)	CKSRYB103K50
	C 5508	(A,62,54)	CKSRYB103K50
	C 5509	(A,68,50)	CKSRYB104K16
	C 5517	(A,68,41)	CKSRYB103K50
	C 5518	(A,66,38)	CKSRYB104K16
	C 5519	(A,62,33)	CKSRYB103K50
	C 5521	(A,63,28)	CKSRYB104K16
	C 5522	(A,64,33)	CKSRYB103K50
	C 5524	(A,58,62)	CEAT100M50
	C 5539	(A,84,25)	CKSRYB104K16
	C 5555	(A,99,32)	CKSRYB104K16
	C 5557	(A,116,38)	CKSRYB104K16
	C 5558	(A,106,36)	CCSRCH470J50
	C 5569	(A,100,48)	CKSRYB103K50
	C 5577	(A,100,57)	CKSRYB103K50
	C 5578	(A,101,62)	CKSRYB103K50
	C 5579	(A,93,64)	CKSRYB102K50
	C 5589	(A,84,63)	CKSRYB104K16
	C 5601	(A,72,6)	CKSRYB102K50
	C 5602	(A,77,6)	CKSRYB102K50
	C 5603	(A,81,6)	CKSRYB102K50
	C 5701	(A,79,172)	CCSRCH101J50
	C 5703	(A,78,176)	CCSRCH101J50
	C 5707	(A,75,185)	CKSRYB102K50
	C 5708	(A,72,182) ELECT. CAPACITOR	CEAT470M35

C HAMP ASSY

MISCELLANEOUS

	IC 3101	(A,22,84) 8CH PWM PROCESSOR IC	TAS5508BPAG
⚠	IC 3121	(A,56,32) REGULATOR IC	NJM78M12DL1A
	IC 3191	(A,99,139) OP-AMP IC	BA10358F
⚠	IC 3201	(A,46,54) DIGITAL AMP IC	TAS5142DDV
⚠	IC 3301	(A,46,84) DIGITAL AMP IC	TAS5142DDV
⚠	IC 3401	(A,46,114) DIGITAL AMP IC	TAS5142DDV
	IC 3901	(A,11,27) DUAL OP-AMP	NJM4565MD
⚠	Q 3181	(A,75,31) TRANSISTOR	2SC4154
	D 3101	(A,28,57) DIODE	MC2846-11
	D 3181	(A,79,28) DIODE	UDZS8R2(B)
	D 3183	(A,67,27) DIODE	1SS352
	D 3184	(A,71,32) DIODE	1SS352
	D 3191	(A,77,138) DIODE	UDZS4R7(B)
	L 3201	(A,63,37) INDUCTOR	ATH7021
	L 3202	(A,63,54) INDUCTOR	ATH7021
	L 3301	(A,63,70) INDUCTOR	ATH7021
	L 3302	(A,63,87) INDUCTOR	ATH7021
	L 3401	(A,63,103) INDUCTOR	ATH7021
	L 3402	(A,63,120) INDUCTOR	ATH7021
	JA 3111	(A,116,42) JACK	XKB3062
	X 3101	(A,18,67) CRYSTAL RESONATOR (13.5 MHz)	ASS7062
	CN 3103	CONNECTOR	CKS3384
	CN 3104	CONNECTOR	CKS3384
	CN 3201	(A,84,140) 2P CONNECTOR	B2P-VH
	CN 3211	(A,116,96) 6CH SPEAKER JACK	AKE7121
	CN 3221	(A,83,24) CONNECTOR POST	B2B-PH
		PCB BINDER	VEF1040

RESISTORS

	R 3101	(A,14,95)	RS1/16S221J
	R 3102	(A,14,92)	RS1/16S221J
	R 3103	(A,11,68)	RS1/16S4R7J
	R 3104	(A,13,78)	RAB4C221J
	R 3106	(A,19,73)	RS1/16S105J
	R 3107	(A,22,72)	RAB4C470J
	R 3108	(A,26,72)	RAB4C470J
	R 3111	(A,29,98)	RS1/16S220J
	R 3112	(A,18,97)	RS1/16S470J
	R 3113	(A,15,97)	RS1/16S3R3J
	R 3114	(A,27,54)	RS1/16S103J
	R 3121	(A,48,19) METAL OXIDE RESISTOR	RS2LMF390J

Mark	No.	Description	Part No.
	R 3122 (A,48,25)	METAL OXIDE RESISTOR	RS2LMF390J
	R 3141 (B,107,35)		RS1/16S331J
	R 3142 (B,104,28)		RS1/16S331J
	R 3151 (A,29,17)		RAB4C103J
	R 3152 (A,36,17)		RAB4C222J
	R 3183 (A,79,33)		RS1/16S681J
	R 3187 (A,79,31)		RS1/16S100J
	R 3191 (A,108,137)	RESISTOR (0.1OHM,2W)	ACN7151
	R 3192 (A,101,135)		RS1/16S1002F
	R 3193 (A,92,140)		RS1/16S1002F
	R 3194 (A,97,133)		RS1/16S1003F
	R 3195 (A,92,141)		RS1/16S1003F
	R 3196 (A,93,133)	CHIP RESISTOR	RS1/16S2201F
	R 3197 (A,79,139)		RS1/16S1002F
⚠	R 3199 (A,94,135)		RS1/16S8R2J
	R 3201 (A,37,46)		RS1/16S100J
	R 3202 (A,37,62)		RS1/16S100J
	R 3204 (A,38,55)		RS1/16S223J
	R 3205 (A,37,50)		RS1/16S221J
⚠	R 3209 (A,36,44)		RS1/16S100J
⚠	R 3210 (A,36,64)		RS1/16S100J
⚠	R 3227 (A,78,36)		RS1/10S3R3J
⚠	R 3228 (A,79,51)		RS1/10S3R3J
	R 3231 (B,83,41)		RS1/10S472J
	R 3232 (B,83,58)		RS1/10S472J
	R 3233 (B,83,49)		RS1/10S472J
	R 3234 (B,83,66)		RS1/10S472J
⚠	R 3235 (B,104,84)		RS1/16S1R0J
⚠	R 3236 (B,95,72)		RS1/16S1R0J
⚠	R 3237 (B,104,72)		RS1/16S1R0J
⚠	R 3238 (B,94,76)		RS1/16S1R0J
⚠	R 3241 (A,57,45)		RS1/10S180J
⚠	R 3242 (A,57,59)		RS1/10S180J
⚠	R 3243 (A,57,49)		RS1/10S180J
⚠	R 3244 (A,57,63)		RS1/10S180J
	R 3301 (A,37,76)		RS1/16S100J
	R 3302 (A,37,92)		RS1/16S100J
	R 3304 (A,38,85)		RS1/16S223J
	R 3305 (A,37,80)		RS1/16S221J
⚠	R 3309 (A,36,74)		RS1/16S100J
⚠	R 3310 (A,36,94)		RS1/16S100J
⚠	R 3327 (A,79,68)		RS1/10S3R3J
⚠	R 3328 (A,79,84)		RS1/10S3R3J
	R 3331 (B,83,74)		RS1/10S472J
	R 3332 (B,83,91)		RS1/10S472J
	R 3333 (B,83,82)		RS1/10S472J
	R 3334 (B,83,99)		RS1/10S472J
⚠	R 3335 (B,97,90)		RS1/16S1R0J
⚠	R 3336 (B,104,99)		RS1/16S1R0J
⚠	R 3337 (B,95,95)		RS1/16S1R0J
⚠	R 3338 (B,109,94)		RS1/16S1R0J
⚠	R 3341 (A,57,75)		RS1/10S180J
⚠	R 3342 (A,57,89)		RS1/10S180J
⚠	R 3343 (A,57,79)		RS1/10S180J
⚠	R 3344 (A,57,93)		RS1/10S180J
	R 3401 (A,37,106)		RS1/16S100J
	R 3402 (A,37,122)		RS1/16S100J
	R 3404 (A,38,115)		RS1/16S223J
	R 3405 (A,37,110)		RS1/16S221J
⚠	R 3409 (A,36,104)		RS1/16S100J
⚠	R 3410 (A,36,124)		RS1/16S100J
⚠	R 3427 (A,79,101)		RS1/10S3R3J
⚠	R 3428 (A,79,117)		RS1/10S3R3J
	R 3431 (B,83,107)		RS1/10S472J
	R 3432 (B,82,123)		RS1/10S472J
	R 3433 (B,83,114)		RS1/10S472J
	R 3434 (B,82,125)		RS1/10S472J
⚠	R 3435 (B,95,110)		RS1/16S1R0J
⚠	R 3436 (B,104,118)		RS1/16S1R0J
⚠	R 3437 (B,92,113)		RS1/16S1R0J
⚠	R 3438 (B,109,109)		RS1/16S1R0J
⚠	R 3441 (A,57,105)		RS1/10S180J
⚠	R 3442 (A,57,119)		RS1/10S180J
⚠	R 3443 (A,57,109)		RS1/10S180J
⚠	R 3444 (A,57,123)		RS1/10S180J
	R 3901 (A,11,39)		RAB4C472J
	R 3905 (A,17,35)		RS1/16S562J
	R 3906 (A,6,35)		RS1/16S562J
	R 3907 (A,15,35)		RS1/16S562J
	R 3908 (A,7,35)		RS1/16S562J
	R 3909 (A,16,32)		RS1/16S183J
	R 3910 (A,6,32)		RS1/16S183J
	R 3911 (A,13,32)		RS1/16S183J
	R 3912 (A,9,32)		RS1/16S183J
	R 3913 (A,11,43)		RS1/16S472J
	R 3914 (A,7,42)		RS1/16S472J
	R 3915 (A,12,41)		RS1/16S472J
	R 3916 (A,8,43)		RS1/16S472J
	R 3923 (A,12,24)		RS1/16S472J
	R 3924 (A,12,21)		RS1/16S472J

CAPACITORS

C	3101 (A,16,92)	CKSRYB104K16
C	3102 (A,14,93)	CKSRYB103K50
C	3103 (A,11,94)	CKSRYB104K16
C	3104 (A,11,91)	CKSRYB104K16
C	3105 (A,14,90)	CKSRYB103K50
C	3106 (A,12,87)	CKSRYB104K16
C	3107 (A,12,86)	CKSRYB104K16
C	3108 (A,12,72)	CEAT100M50
C	3109 (A,12,84)	CKSRYB102K50
C	3110 (A,16,77)	CKSRYB104K16
C	3111 (A,13,64)	CEAT100M50
C	3112 (A,17,76)	CKSRYB104K16
C	3113 (A,17,74)	CCSRCH180J50
C	3114 (A,17,73)	CCSRCH150J50
C	3115 (A,28,76)	CKSRYB104K16
C	3116 (A,28,75)	CKSRYB104K16
C	3117 (A,26,66)	CEAT100M50
C	3118 (A,29,92)	CKSRYB104K16
C	3119 (A,24,94)	CKSRYB104K16
C	3120 (A,25,97)	CEAT100M50
C	3121 (A,68,30)	CEAT100M50
C	3123 (A,66,25)	CEAT100M50
C	3141 (B,107,37)	CCSRCH221J50
C	3142 (B,102,28)	CCSRCH221J50
C	3151 (B,24,20)	CKSRYB104K16
C	3182 (A,77,24)	ELECT. CAPACITOR CEAT470M35
C	3192 (A,98,135)	CKSRYB104K50
C	3201 (A,39,45)	CKSRYB104K16

Mark	No.	Description	Part No.
C	3202 (A,39,63)		CKSRYB104K16
C	3205 (A,39,48)		CKSRYB104K16
C	3206 (A,38,53)		CKSRYB104K16
C	3207 (A,37,44)		CKSRYB104K16
C	3208 (A,37,64)		CKSRYB104K16
C	3211 (A,59,42)		CKSRYB104K50
C	3212 (A,59,57)		CKSRYB104K50
C	3213 (A,59,51)		CKSRYB104K50
C	3214 (A,59,65)		CKSRYB104K50
C	3215 (B,57,41)		CKSRYB333K50
C	3216 (B,57,55)		CKSRYB333K50
C	3217 (B,57,53)		CKSRYB333K50
C	3218 (B,57,67)		CKSRYB333K50
C	3221 (A,86,43)	ELECT. CAPACITOR	CEAT102M35
C	3222 (A,86,59)	ELECT. CAPACITOR	CEAT102M35
C	3223 (A,80,37)		CKSRYB103K50
C	3224 (A,80,54)		CKSRYB103K50
C	3225 (A,80,48)		CKSRYB102K50
C	3226 (A,80,65)		CKSRYB102K50
C	3231 (A,79,45)		CFTLA474J2A
C	3232 (A,79,62)		CFTLA474J2A
C	3237 (B,105,87)		CKSRYB103K50
C	3238 (B,99,74)		CKSRYB103K50
C	3239 (B,103,74)		CKSRYB103K50
C	3240 (B,94,78)		CKSRYB103K50
C	3241 (A,56,44)		CKSRYB331K50
C	3242 (A,56,58)		CKSRYB331K50
C	3243 (A,56,50)		CKSRYB331K50
C	3244 (A,56,64)		CKSRYB331K50
C	3245 (B,104,82)		CKSRYB104K50
C	3246 (B,99,75)		CKSRYB104K50
C	3247 (B,104,75)		CKSRYB104K50
C	3248 (B,95,81)		CKSRYB104K50
C	3301 (A,39,75)		CKSRYB104K16
C	3302 (A,39,93)		CKSRYB104K16
C	3305 (A,39,78)		CKSRYB104K16
C	3306 (A,38,83)		CKSRYB104K16
C	3307 (A,37,74)		CKSRYB104K16
C	3308 (A,37,94)		CKSRYB104K16
C	3311 (A,59,73)		CKSRYB104K50
C	3312 (A,59,87)		CKSRYB104K50
C	3313 (A,59,81)		CKSRYB104K50
C	3314 (A,59,95)		CKSRYB104K50
C	3315 (B,57,71)		CKSRYB333K50
C	3316 (B,57,85)		CKSRYB333K50
C	3317 (B,57,83)		CKSRYB333K50
C	3318 (B,57,97)		CKSRYB333K50
C	3321 (A,86,76)	ELECT. CAPACITOR	CEAT102M35
C	3322 (A,86,92)	ELECT. CAPACITOR	CEAT102M35
C	3323 (A,80,70)		CKSRYB103K50
C	3324 (A,80,87)		CKSRYB103K50
C	3325 (A,80,81)		CKSRYB102K50
C	3326 (A,80,98)		CKSRYB102K50
C	3331 (A,79,78)		CFTLA474J2A
C	3332 (A,79,95)		CFTLA474J2A
C	3337 (B,98,89)		CKSRYB103K50
C	3338 (B,103,97)		CKSRYB103K50
C	3339 (B,94,98)		CKSRYB103K50
C	3340 (B,108,91)		CKSRYB103K50
C	3341 (A,56,74)		CKSRYB331K50
C	3342 (A,56,88)		CKSRYB331K50
C	3343 (A,56,80)		CKSRYB331K50
C	3344 (A,56,94)		CKSRYB331K50
C	3345 (B,101,90)		CKSRYB104K50
C	3346 (B,102,99)		CKSRYB104K50
C	3347 (B,94,100)		CKSRYB104K50
C	3348 (B,107,90)		CKSRYB104K50
C	3401 (A,39,105)		CKSRYB104K16
C	3402 (A,39,123)		CKSRYB104K16
C	3405 (A,39,108)		CKSRYB104K16
C	3406 (A,38,113)		CKSRYB104K16
C	3407 (A,37,104)		CKSRYB104K16
C	3408 (A,37,124)		CKSRYB104K16
C	3411 (A,59,103)		CKSRYB104K50
C	3412 (A,59,117)		CKSRYB104K50
C	3413 (A,59,111)		CKSRYB104K50
C	3414 (A,59,126)		CKSRYB104K50
C	3415 (B,57,101)		CKSRYB333K50
C	3416 (B,59,117)		CKSRYB333K50
C	3417 (B,57,114)		CKSRYB333K50
C	3418 (B,57,127)		CKSRYB333K50
C	3421 (A,86,109)	ELECT. CAPACITOR	CEAT102M35
C	3422 (A,86,125)	ELECT. CAPACITOR	CEAT102M35
C	3423 (A,80,103)		CKSRYB103K50
C	3424 (A,80,120)		CKSRYB103K50
C	3425 (A,80,114)		CKSRYB102K50
C	3426 (A,80,131)		CKSRYB102K50
C	3431 (A,79,111)		CFTLA474J2A
C	3432 (A,79,128)		CFTLA474J2A
C	3437 (B,93,108)		CKSRYB103K50
C	3438 (B,105,120)		CKSRYB103K50
C	3439 (B,90,114)		CKSRYB103K50
C	3440 (B,108,106)		CKSRYB103K50
C	3441 (A,56,104)		CKSRYB331K50
C	3442 (A,56,118)		CKSRYB331K50
C	3443 (A,56,110)		CKSRYB331K50
C	3444 (A,56,124)		CKSRYB331K50
C	3445 (B,96,107)		CKSRYB104K50
C	3446 (B,106,117)		CKSRYB104K50
C	3447 (B,94,113)		CKSRYB104K50
C	3448 (B,107,105)		CKSRYB104K50
C	3901 (A,13,35)		CCSRCH681J50
C	3902 (A,9,35)		CCSRCH681J50
C	3903 (A,13,36)		CCSRCH681J50
C	3904 (A,9,36)		CCSRCH681J50
C	3905 (A,16,33)		CCSRCH181J50
C	3906 (A,6,33)		CCSRCH181J50
C	3907 (A,13,33)		CCSRCH561J50
C	3908 (A,9,33)		CCSRCH561J50
C	3921 (A,19,18)		CEAT100M50
C	3922 (A,16,23)		CEAT100M50
C	3923 (A,9,24)		CKSRYB104K16
C	3924 (A,12,22)		CKSRYB104K16

D DISPLAY ASSY

MISCELLANEOUS

IC	5901 (B,238,33)	FL DRIVER IC	PT6315
Q	5903 (B,176,21)	TRANSISTOR	2SC4081

Mark	No.	Description	Part No.
Q	5904 (B,176,25)	TRANSISTOR	2SC4081
D	5903 (A,161,33)	LED(BLUE)	SLR343BC4T(JKLM)
D	5905 (A,168,26)	LED(YELLOW)	SLI-343YC(TUV)
L	5901 (B,242,56)	INDUCTOR	LCYA220J2520
L	5902 (B,225,49)	INDUCTOR	LCYA220J2520
V	5901 (A,196,17)	FL TUBE	XAV3034
S	5901 (A,141,39)	SWITCH	VSG1024
S	5902 (A,155,30)	SWITCH	VSG1024
S	5903 (A,172,30)	SWITCH	VSG1024
S	5904 (A,141,13)	SWITCH	VSG1024
S	5905 (A,161,41)	SWITCH	VSG1024
S	5906 (A,161,19)	SWITCH	VSG1024
S	5907 (A,290,14)	SWITCH	VSG1024
S	5908 (A,308,28)	SWITCH	VSG1024
S	5909 (A,313,11)	SWITCH	VSG1024
CN	5901 (A,230,62)	11P CONNECTOR	52044-1145
CN	5902 (A,155,62)	5P CONNECTOR	52044-0545
	5	FL SPACER	XEB3109

RESISTORS

R	5901 (B,273,30)		RS1/16S221J
R	5902 (B,271,30)		RS1/16S221J
R	5903 (B,275,30)		RS1/16S221J
R	5904 (B,247,26)		RS1/16S823J
R	5911 (B,149,26)		RS1/16S102J
R	5912 (B,152,22)		RS1/16S122J
R	5913 (B,149,22)		RS1/16S152J
R	5914 (B,147,22)		RS1/16S182J
R	5915 (B,156,17)		RS1/16S272J
R	5916 (B,158,17)		RS1/16S332J
R	5917 (B,308,22)		RS1/16S562J
R	5918 (B,310,22)		RS1/16S822J
R	5919 (B,166,59)		RS1/10S122J
R	5920 (A,285,13)		RS1/10S152J
R	5921 (B,180,21)		RS1/16S472J
R	5922 (B,171,59)		RS1/10S152J
R	5923 (B,174,59)		RS1/10S152J
R	5924 (B,180,25)		RS1/16S472J
R	5925 (B,177,59)		RS1/10S152J
R	5926 (B,164,59)		RS1/10S122J
R	5927 (B,161,59)		RS1/10S122J
R	5928 (B,157,22)		RS1/16S0R0J
R	5929 (B,180,59)		RS1/10S152J
R	5930 (B,174,36)		RS1/16S0R0J

CAPACITORS

C	5907 (A,291,23)	ELECT. CAPACITOR	CEJQ470M50
C	5911 (B,240,57)		CKSRYB223K50
C	5912 (B,246,57)		CKSRYB223K50
C	5913 (A,253,54)		CEAL470M6R3
C	5915 (B,242,23)		CKSRYB103K50
C	5916 (B,221,48)		CKSRYB223K50
C	5917 (B,227,49)		CKSRYB223K50
C	5918 (A,234,55)	ELECTR. CAPACITOR	CEAL470M35
C	5920 (B,273,26)		CKSRYB221K50
C	5921 (B,271,26)		CKSRYB221K50
C	5922 (B,275,26)		CKSRYB221K50
C	5953 (B,154,22)		CKSRYB104K50
C	5954 (B,177,36)		CKSRYB104K50

E HP/MIC ASSY

MISCELLANEOUS

IC	3921 (B,216,86)	DUAL OP-AMP	NJM4565MD
Q	5971 (B,305,109)	DIGITAL TR(SC-70)	RT1P241M
Q	5973 (B,256,102)	TRANSISTOR	IMX9
Q	5974 (B,233,104)	TRANSISTOR	IMX9
D	5801 (B,307,88)	ZENER DIODE	UMZU6.2N
L	5971 (B,252,77)	INDUCTOR	CTF1306
L	5972 (B,249,92)	INDUCTOR	CTF1306
JA	3921 (A,158,85)	MIC JACK	XKN3012
JA	3922 (A,178,85)	MIC JACK	XKN3012
JA	5801 (A,299,82)	JACK	XKB3056
JA	5902 (A,257,85)	MINITURE JACK	AKN7005
JA	5941 (A,277,85)	MINITURE JACK	AKN7005
KN	1 (A,280,107)	WRAPPING TERMINAL	VNF1084
KN	4 (A,185,102)	WRAPPING TERMINAL	VNF1084
VR	3921 (A,198,85)	VARIABLE(10K-X1)	XCS3007
CN	3921 (A,151,103)	5P CONNECTOR	52044-0545
CN	3941 (A,314,82)	CONNECTOR	52044-0345
CN	5203 (A,154,107)	CONNECTOR	CKS3370
CN	5903 (A,314,93)	11P CONNECTOR	52044-1145
	5201 (A,232,85)	REMOTE RECEIVER UNIT	GP1UM27XK0VF

RESISTORS

R	3921 (B,152,79)		RS1/16S332J
R	3922 (B,172,79)		RS1/16S332J
R	3925 (B,215,78)		RS1/16S473J
R	3926 (B,219,78)		RS1/16S103J
R	3927 (B,211,89)		RS1/16S473J
R	3928 (B,221,89)		RS1/16S332J
R	3929 (B,225,78)		RS1/16S332J
R	3930 (B,219,93)		RS1/16S152J
R	3931 (B,217,93)		RS1/16S123J
R	3948 (B,277,77)		RS1/16S680J
R	5203 (B,234,79)		RS1/16S470J
R	5204 (B,238,90)		RS1/16S101J
R	5205 (B,236,79)		RS1/16S104J
R	5979 (B,247,106)		RS1/16S680J
R	5980 (B,248,102)		RS1/16S680J
R	5981 (B,249,106)		RS1/16S680J
R	5982 (B,247,102)		RS1/16S680J
R	5983 (B,245,106)		RS1/16S680J
R	5984 (B,243,102)		RS1/16S680J
R	5985 (B,243,106)		RS1/16S680J
R	5986 (B,245,102)		RS1/16S680J
R	5990 (B,312,109)		RS1/16S680J
R	5991 (B,290,94)		RS1/16S680J
R	5992 (B,303,109)		RS1/16S680J
R	5993 (B,293,94)		RS1/16S680J
R	5994 (B,297,101)		RS1/16S680J
R	5995 (B,263,103)		RS1/16S472J
R	5996 (B,298,105)		RS1/16S472J
R	5997 (B,265,103)		RS1/16S472J
R	5998 (B,296,105)		RS1/16S472J

CAPACITORS

C	3920 (B,265,79)		CKSRYB104K50
C	3921 (B,154,79)		CCSRCH101J50
C	3922 (B,174,79)		CCSRCH101J50
C	3925 (A,168,77)		CEAT2R2M50
C	3928 (B,217,78)		CKSRYB681K50

Mark	No.	Description	Part No.
C	3929	(A,208,77)	CEJQ2R2M50
C	3930	(A,210,94)	CEAT2R2M50
C	3931	(A,208,88)	CEAT470M16
C	3932	(B,221,78)	CKSRYB104K50
C	3933	(B,223,78)	CCSRCH101J50
C	3935	(A,224,94)	CEAT2R2M50
C	3936	(B,215,93)	CKSRYB122K50
C	3938	(B,222,84)	CKSRYB104K50
C	3941	(B,284,78)	CKSRYB103K50
C	3942	(B,287,87)	CKSRYB103K50
C	3945	(B,275,77)	CKSRYB103K50
C	5201	(A,242,83)	CEAL470M6R3
C	5202	(B,238,84)	CKSRYB223K50
C	5801	(A,313,76)	CEJQ221M6R3
C	5802	(B,295,90)	CKSRYB104K50
C	5804	(B,301,82)	CKSRYB104K50
C	5805	(B,292,89)	CKSRYB104K50
C	5985	(B,241,106)	CKSRYB102K50
C	5986	(B,241,102)	CKSRYB102K50
C	5987	(B,248,77)	CKSRYB473K50
C	5988	(B,253,92)	CKSRYB473K50
C	5989	(B,263,92)	CKSRYB103K50

F DVD TRADE ASSY

MISCELLANEOUS

CN	5974	(A,22,113) 12P CONNECTOR	VKN1243
CN	5975	(A,22,91) 12P CONNECTOR	VKN1243
CN	5976	(A,58,115) 4P CONNECTOR	VKN1235
CN	5977	(A,47,90) 4P CONNECTOR	VKN1235
	6	PCB BINDER	VEF1040

G REGULATOR TRADE ASSY

MISCELLANEOUS

⚠ IC	5970	(A,53,23) 4-PIN REGULATOR	PQ033RDA1SSH
⚠ IC	5971	(A,35,23) 4-PIN REGULATOR	PQ033RDA1SSH
⚠ IC	5972	(A,36,47) IC	BD9702T-V5
⚠ IC	5973	(A,68,26) REGULATOR IC	NJM2388F05
⚠ IC	5974	(A,75,42) PROTECTOR(1.5A)	AEK7011
Q	5905	(B,57,34) DIGITAL TR(SC-70)	RT1N431M
D	5970	(B,33,49) DIODE	RB051L-40
D	5971	(B,55,39) DIODE	UDZS6R8(B)
L	5970	(A,68,45) COIL	XTH1002
KN	2	(A,116,53) SCREW PLATE	VNE1948
KN	5	(A,12,51) WRAPPING TERMINAL	VNF1084
CN	5970	(A,121,20) 20P SOCKET	AKP7129
CN	5971	(A,36,69) L-PLUG(14P)	KM200NA14L
CN	5973	(A,89,44) 2P CONNECTOR	B2P-VH
	3	SCREW	PMZ30P060FCC
	1	HEAT SINK	XNH3047
	2	HEAT SINK	XNH3047

RESISTORS

R	5970	(B,44,29)	RS1/10S472J
R	5971	(B,41,30)	RS1/10S331J
R	5972	(B,22,22)	RS1/10S102J
R	5973	(B,51,46)	RS1/10S102J
R	5974	(B,51,50)	RS1/10S472J
R	5975	(B,49,50)	RS1/10S102J
R	5976	(B,55,35)	RS1/10S682J
R	5977	(B,57,39)	RS1/10S392J

Mark	No.	Description	Part No.

CAPACITORS

C	5970	(A,27,46)	CEHAZL330M16
C	5971	(B,46,30)	CKSRYB104K16
C	5972	(A,33,36)	CEHAZL330M16
C	5974	(B,47,50)	CKSRYB472K50
C	5975	(A,51,42) ELECT. CAPACITOR	CEHAZL331M16
C	5976	(A,82,26)	CEAT470M16
C	5977	(B,71,45)	CKSRYB104K16
C	5980	(A,42,37)	CEAT100M50

H POWER SUPPLY UNIT

POWER SUPPLY UNIT has no service parts.

I FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service parts.